

**UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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Crye Precision LLC,  
Petitioner

v.

FirstSpear, LLC,  
Patent Owner

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Patent No. 9,974,379 to Cole et al.

IPR Case No.: IPR2019-01152

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**PETITION FOR *INTER PARTES* REVIEW OF CLAIMS 1-  
11, 13-14, 17-19, 21-23 OF U.S. PATENT 9,974,379 UNDER 35  
U.S.C. §§ 311-319 AND 37 C.F.R. §§ 42.100 ET SEQ.**

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<b>Exhibit</b>	<b>Description</b>
1001	U.S. Patent No. 9,974,379 (“’379 patent”)
1002	File history of U.S. Patent No. 9,974,379 (“’379 FH”)
1003	Declaration of Dr. Christopher M. Pastore (“Ex. 1003-Pastore”)
1004	U.S. Patent No. 9,173,436 (“Crye-436”)
1005	U.S. Patent App. Pub. No. 2013/0312149 (“Asher-149”)
1006	U.S. Patent No. 5,724,707 (“Kirk-707”)
1007	U.S. Patent Publication No. 2009/0277936
1008	U.S. Patent No. 7,200,871
1009	U.S. Patent No. 5,789,327
1010	Technical Manual - Operator’s Manual for Modular Lightweight Load-Carrying Equipment (MOLLE) II, Department of the Army, November 2, 2009
1011	U.S. Patent Application Publication No. 2008/0318017
1012	Drawing of UBFA (58) of Crye-436 showing an example of slits (80) to total surface area ratio
1013	U.S. Patent No. 3,891,996
1014	Ballistic Resistance of Body Armor, NIJ Standard-0101.06, July 2008, NCJ 223054
1015	U.S. Patent No. 5,692,237 (“Bennett-237”)
1016	U.S. Patent No. 8,132,495

Crye Precision LLC (“Petitioner”) hereby seeks *inter partes* review of Claims 1-11, 13-14, 17-19, and 21-23 (“the Challenged Claims”) of U.S. Patent No. 9,974,379. (Ex. 1001 (the “’379 patent”).) The Challenged Claims of the ’379 patent should be canceled for the reasons described in this Petition.

**I. MANDATORY NOTICES UNDER 37 C.F.R. § 42.8(a)(1) FOR *INTER PARTES* REVIEW**

**A. Real Party in Interest Under 37 C.F.R. § 42.8(b)(1)**

The real party-in-interest in this petition is Crye Precision LLC, 63 Flushing Avenue, Unit 252, Brooklyn, New York 11205.

**B. Related Matters Under 37 C.F.R. § 42.8(b)(2)**

The undersigned is unaware of any judicial or administrative matter that would affect, or be affected by, a decision in the proceeding. However, Patent Owner has filed two IPR’s against the primary reference cited in this Petition (U.S. Patent No. 9,173,436). Those IPR numbers are IPR2019-01169 and IPR2019-01170.

**C. Lead and Backup Counsel Under 37 C.F.R. § 42.8(b)(3) and Service Information under 37 C.F.R. § 42.8(b)(4)**

Petitioner designates the following lead and backup counsel:

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Service on Petitioner may be made by mail or hand delivery to: Greenberg Traurig, LLP, 1200 17th St., Suite 2400, Denver, CO, 80202. Petitioner also consents to, and prefers, electronic service by emailing counsel of record at [briggsh@gtlaw.com](mailto:briggsh@gtlaw.com), [schindlerb@gtlaw.com](mailto:schindlerb@gtlaw.com), and [crye-ipsr@gtlaw.com](mailto:crye-ipsr@gtlaw.com).

## **II. PAYMENT OF FEES UNDER 37 C.F.R. § 42.15**

Petitioner authorizes the U.S. Patent & Trademark Office to charge Deposit Account No. 50-2638 for the fee set in 37 C.F.R. § 42.15(a) for this Petition and further authorizes for any additional fees to be charged to this Deposit Account.

## **III. CERTIFICATION OF WORD COUNT UNDER 37 C.F.R. § 42.24(d)**

Petitioner certifies that the word count in this Petition is 13,777 words, as counted by the word-processing program (Microsoft Word 2016) used to generate this Petition, where such word count excludes the table of contents, table of

authorities, mandatory notices, certificate of service, appendix of exhibits, and this certificate of word count. This Petition is in compliance with the 14,000 word limit set forth in 37 C.F.R. § 42.24(a)(1)(i).

#### **IV. REQUIREMENTS FOR IPR UNDER 37 C.F.R. § 42.104**

##### **A. Grounds for Standing Under 37 C.F.R. § 42.104(a)**

Petitioner certifies that the '379 patent is available for *inter partes* review, and that Petitioner is not barred or estopped from requesting an *inter partes* review on the grounds identified in the petition.

##### **B. Identification of Challenge Under 37 C.F.R. § 42.104(b) and Relief Requested**

Petitioner respectfully requests that the Challenged Claims of the '379 patent (Ex. 1001) be cancelled based on the following grounds of unpatentability:

<b>Grounds of Unpatentability</b>	<b>'379 Patent Claims</b>	<b>Basis for Rejection under 35 U.S.C. § 103</b>
<b>Ground 1</b>	1, 3-7, 10-11, 13-14, 17-19, 21-23	Rendered obvious by U.S. Patent No. 9,173,436 to Crye (Ex. 1004, "Crye-436")
<b>Ground 2</b>	1-11	Rendered obvious by Crye-436 in view of U.S. Patent No. 5,692,237 to Bennett (Ex. 1015)
<b>Ground 3</b>	1-11	Rendered obvious by Crye-436 in view of U.S. Patent App. Pub. No. 2013/0312149 to Asher (Ex. 1005)



**V. PRIORITY DATE, PROSECUTION HISTORY, CHALLENGED CLAIMS, POSITA DEFINITION AND CLAIM CONSTRUCTION**

**A. Priority Date**

The '379 patent issued on May 22, 2018, from Application No. 15/431,377 filed on February 13, 2017 and claims priority through other applications to U.S. Patent Provisional Application No. 61/521,309, filed on August 8, 2011. However, because the provisional application fails to disclose various features of the claims, the '379 patent is not entitled to the August 8, 2011 priority date. *Dynamic Drinkware, LLC v. National Graphics, Inc.*, 800 F.3d 1375 (Fed. Cir. 2015). As one example, claim 1 requires the limitation “at least one element of the carrier or a backing element bounding a generally flat cavity.” (Ex. 1001 at 10:59-62.) Independent claims 13 and 19 require a similar limitation. (*Id.* at 11:43-46 and 12:29-34.) These limitations are not shown or described in the provisional patent application. Thus, the priority date for the '379 patent is August 8, 2012, i.e., the filing date of its corresponding PCT application.<sup>1</sup>

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<sup>1</sup> In the event Patent Owner challenges this finding, Petitioner reserves the right to show that other and/or additional limitations of the Challenged Claims are not entitled to claim priority to the provisional patent application.

**B. The Prosecution History of the '379 Patent**

The '379 patent was not subject to any rejections by the Office as the '379 patent received a first action allowance. (Ex. 1002 at 7-12.)

**C. The Challenged Claims**

Claims 1, 13, and 19 are the independent Challenged Claims of the '379 patent. Claims 1-11, 13-14, 17-19, and 21-23 comprise the Challenged Claims.

**D. Person of Ordinary Skill in the Art (“POSITA”)**

A POSITA in the field of the '379 patent as of its priority date (August 8, 2012) would have at least a Master's Degree in an academic area emphasizing textile design and fabrication, or an equivalent field (or a similar technical Master's Degree, or higher degree) with a concentration in textile design and fabrication. Alternatively, a POSITA would have had a Bachelor's Degree (or higher degree) in an academic area emphasizing textile design and fabrication with two or more years of work experience in textile design and fabrication. Additional education in a relevant field, or relevant industry experience may compensate for a deficit in one of the other aspects of the requirements stated above. (Ex. 1003-Pastore at ¶¶24-29.)

**E. Claim Construction**

Per 37 C.F.R. § 42.100(b):

“[A] claim of a patent in an IPR shall be construed using the same claim construction standard that would be used to construe the claim in a civil

action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. Any prior claim construction ... that is timely made of record in the inter partes review proceeding will be considered.”

Petitioner is currently unaware of any claim constructions that have been made in any civil action or in a proceeding before the ITC. Further, Petitioner does not believe any specific constructions are required at this time. Accordingly, all terms of the '379 patent have been given their ordinary and customary meaning in this Petition. Petitioner reserves the right to propose specific constructions if it becomes appropriate/necessary during the course of these proceedings.

## **VI. OVERVIEW OF THE STATE OF THE ART AND THE PURPORTED ADVANCE OF THE '379 PATENT**

### **A. MOLLE and PALS**

The '379 patent relates to vests and other articles of clothing designed for compatibility with the military's MOLLE standard. (Ex. 1001 at 2:21-5:17.) MOLLE (pronounced *MOLLY*) is an acronym for MOdular Lightweight Load-carrying Equipment, and is used to define the current generation of load-bearing equipment and rucksacks utilized by the United States Army. (Ex. 1007 at ¶7.)

“The modularity of the [MOLLE] system is derived from the use of Pouch Attachment Ladder System or PALS webbing, rows of heavy-

duty nylon precisely stitched onto the vest as to allow for attachment of various MOLLE-compatible pouches and accessories. This method of attachment has become somewhat of a standard for all quality modular military gear, replacing the click and stick system used in the earliest modular vest systems (which is still in use with most Western police departments). It is produced for the United States Government under contract by several contractors. See for example, U.S. Pat. No. 5,724,707.” (*Id.*)

PALS is an acronym for “pouch attachment ladder system.” (*Id.*)

“PALS is a grid of webbing invented and patented by United States Army Natick Soldier Research, Development and Engineering Center used to attach smaller equipment onto load-bearing platforms, such as vests and backpacks. It was first used on MOLLE rucksacks, but is now found on a variety of American equipment, such as the Improved Outer Tactical Vest, Interceptor body armor, USMC Improved Load Bearing Equipment backpack and Modular Tactical Vest. The PALS grid consists of horizontal rows of 1” Mil-W-43668 Type III nylon webbing (most commercial vendors use Type IIIa), spaced 1” apart, and reattached by reinforced stitches or seams to the backing at 1.5” intervals.” (*Id.* at ¶¶8-9.)

The '379 patent recognizes that the MOLLE system is conventional and agrees that the MOLLE system appears to have been first described in U.S. Patent No. 5,724,707 (Ex. 1006 or “Kirk-707”). (Ex. 1001 at 1:36-62.) Accordingly, the

'379 patent admits that both the MOLLE and PALS systems are well known to those skilled in the art.

***“Modular pouch attachment systems and methods for carrier garments, hereinafter sometimes referred to by the term carrier or carriers, **such as, but not limited to, vests**, cummerbunds, belts, and the like, for carrying **holders such as, but not limited to, pouches for holding items and accessories on a person’s body, are well known**.*** Advantages include an ability to attach pouches and accessories to a platform and easily remove them; rearrange or configure them; and exchange for other pouches or accessories.” (*Id.* at 1:28-36 (emphasis added).)

As the prior art and the '379 patent explain, in the MOLLE system, straps of a holder (e.g., a pouch) are attached by weaving them through the PALS webbing on the article of clothing and the corresponding holder. This is shown by, for instance, the below figures of Kirk-707:

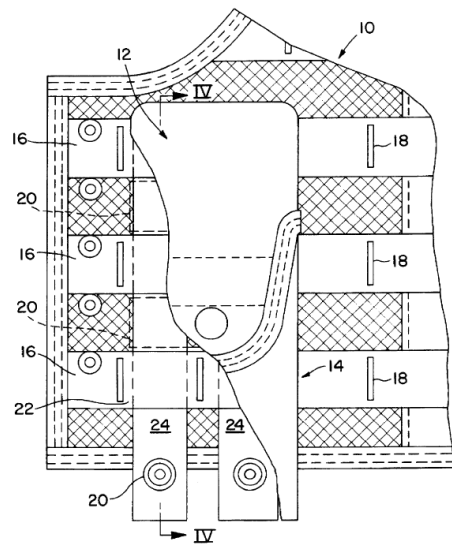


FIG. 1

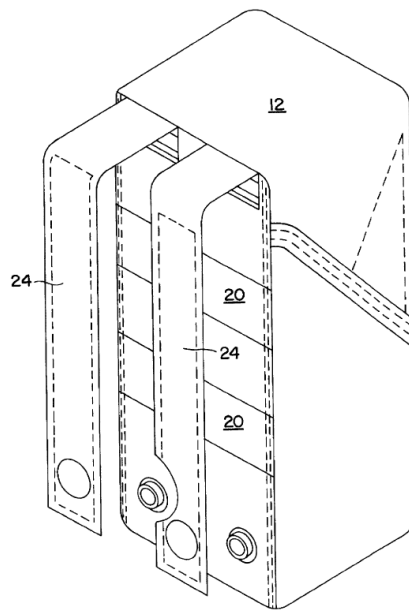


FIG. 3

(Ex. 1006 at FIGS. 1, 3.) As the Background of the '379 patent admits:

“A pouch or other accessory will include one or more elongate straps configured to be inserted through the aligned loops. The straps will typically each be attached at one end to the pouch or accessory, and have an opposite free end. The backside of the pouch or other accessory will typically include additional loops positioned to be disposed in alternating relation to the loops on the panel, such that the straps can be alternately woven through the loops on the panel and the back of the pouch or accessory, for attaching the pouch or accessory to the panel. The free end of the attachment straps can then be secured, using a snap, hook and loop fastener, or the like, to the back of the pouch or accessory.” (Ex. 1001 at 1:50-62.)

This prior methodology / arrangement is confirmed and demonstrated by FIGS. 1-2 of the '379 patent:

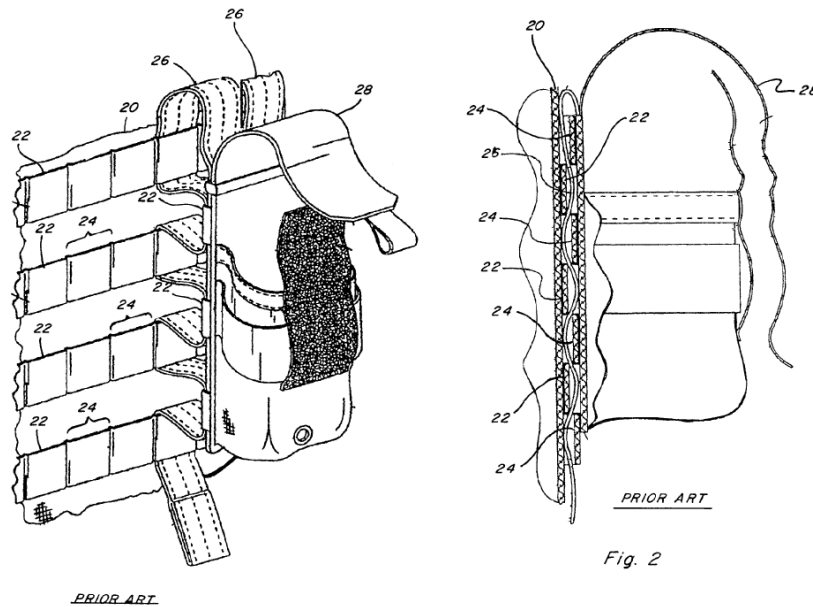


Fig. 1

Fig. 2

Aside from Kirk-707, there are dozens of U.S. patents and published patent applications pre-dating the '379 patent that describe various uses of, applications for, and configurations of the well-known MOLLE and PALS systems.<sup>2</sup>

### B. The Purported Advance of the '379 Patent

The purported advance of the '379 patent appears to be the use of a hook-and-loop (VELCRO) attachment system on the backside (inside) of a MOLLE compatible platform to attach holders (pouches) thereto, the holders having the other component of the hook-and-loop fastening system. (Ex. 1003-Pastore at ¶¶30-33.)

As the '379 patent states:

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<sup>2</sup> The 2009 Army instruction manual on MOLLE (Ex. 1010) provides background regarding MOLLE and PALS systems.

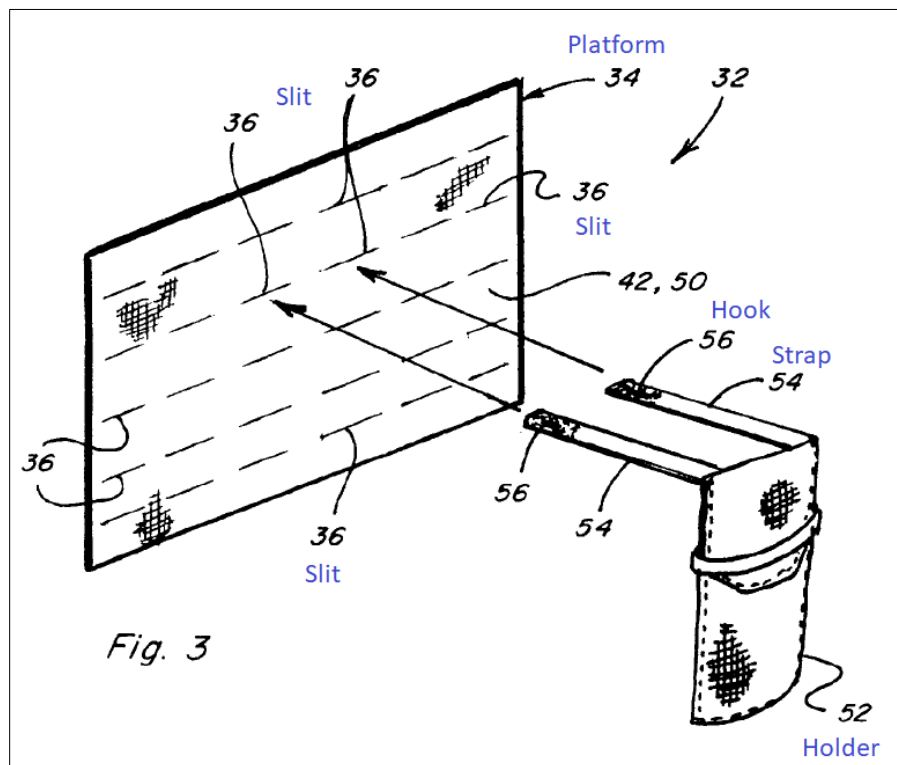
“Although past known carriers utilizing hook and loop fasteners have suffered from these disadvantages, *inherent advantages of hook and loop fasteners such as ease and familiarity of use, and non-metallic construction, still make them attractive.* The non-metallic attribute is particularly desirable for military applications wherein the carrier is subject to explosions which can cause metallic objects to fragment and possibly injure wearers. *As a result, it is still sought to find a manner of use hook and loop type fasteners for attachment of holders and the like, particularly for military carrier applications.* Therefore, what is sought is *an attachment system and method that utilizes the advantageous attributes of hook and loop fastening systems,* but which overcomes one or more of the know disadvantages thereof, set forth above.” (Ex. 1001 at 2:3-18 (emphasis added).)

“What is disclosed is an attachment system and method for carrier garments such as, but not limited to, vests, cummerbunds, belts, shirts, jackets, pants, and the like, *that utilizes the advantageous attributes of hook and loop fastening systems,* but which overcomes one or more of the known disadvantages thereof set forth above. According to a preferred aspect of the invention, the attachment system utilizes *a platform having* a front side, *an opposite back side,* and a plurality of slits through the platform arranged in a predetermined pattern of vertically aligned and spaced apart rows, configured for receiving elements for attaching at least one holder to the platform.... According to another aspect of the invention, *a back side of the platform faces and covers the outer surface of the carrier or backing element and includes a first fastening component of a hook and loop fastening system thereon*



adjacent to, e.g., around or beside, the slits, and disposed in opposing relation to the carrier or backing element surface. This forms a generally flat pocket or cavity between the opposing surface and the back side, into which a user can insert his or her fingers for attaching and detaching objects to/from the fastening component, and/or weaving straps through the slits.” (*Id.* at 2:21-56 (emphasis added).)

The '379 patent goes on to explain how using a hook-and-loop system on the back side “is advantageous as the carrier surface or backing element protects the component of the hook and loop fastener, and with the fastener component located on the back side and in the pocket or cavity, noise generated when detaching from the fastener is contained and muted or muffled so as to be suitable for applications where silence when configuring the system, e.g., adding, removing, moving holders, is required.” (*Id.* at 2:56-63.) FIG. 3 of the '379 patent is representative of the above-described configuration:



As shown, tabs or straps (54) of a holder (52) are inserted through slits (36) of a platform (34). After insertion, the hooks (56) of the straps (54) are attached to corresponding loops (not shown) on the back side of the platform. (*Id.* at 5:25-28, 8:4-31; Ex. 1003-Pastore at ¶¶34-35.) As explained relative to FIGS. 8 and 13:

“[P]latform 34 of the attachment system 32 comprises a back side 48 having a first component of a suitable fastening system thereon, such as, but not limited to, a loop pile fabric 48 of a hook and loop fastening system such as available under the trademark Velcro.” (*Id.* at 7:58-63.)

“FIG. 8 shows the back side 46 of a representative platform 34 of the invention, with top, bottom and middle tabs 54 of a pouch (FIGS. 6 and 7) through respective slits 36 therethrough and attached pile fabric 48.

In FIG. 13, V shape tabs have two hook surfaces extending in different direction and attached to the loop fabric.” (*Id.* at 8:32-37.)

Thus, the purported technological advance of the ’379 patent appears to be directed to facilitating attachment of MOLLE compatible pouches (holders) by using a loop (or hook) material on the back side of a MOLLE compatible platform and using corresponding hook (or loop) material on straps of the MOLLE compatible pouches to facilitate attachment to the back side of the MOLLE compatible platform. (Ex. 1003-Pastore at ¶¶36-37.)

Despite the foregoing, very few claims of the ’379 patent actually require the configuration described above where a component of a hook-and-loop system is included on the back side of a platform to attach corresponding pouches thereto. Instead, the Challenged Claims of the ’379 patent merely claim well-known MOLLE compatible configurations. Therefore, and as shown in detail herein, the Challenged Claims are invalid.

## **VII. OVERVIEW OF THE PRIOR ART**

### **A. Overview of Crye-436 (Ex. 1004-Crye)**

Crye-436 is an issued U.S. Patent of U.S. Nonprovisional Application No. 13/006,529, filed on January 14, 2011. Crye-436 also published on July 19, 2012 as U.S. Patent Application Publication No. 2012/0180184. Thus, Crye-436 is prior art to the ’379 patent under at least pre-AIA §§ 102(a), (e).

Crye-436 is entitled “MOLLE compatible lightweight garment” and describes lightweight garments employing a unitary bearing frame assembly. (Ex. 1004-Crye at 1:53-64.) FIGS. 3-4 (below) illustrate an example garment (56) and a corresponding unitary bearing frame assembly (58) (“UBFA”).

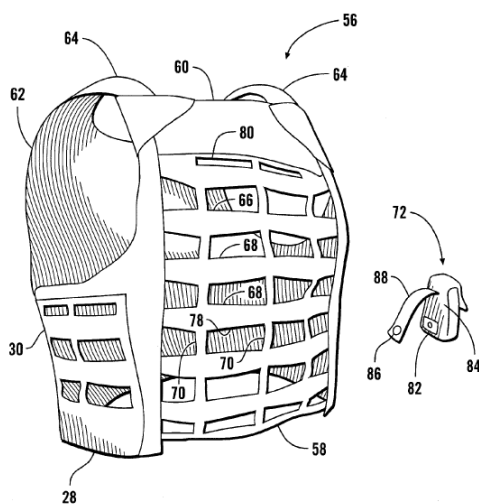


FIG. 3

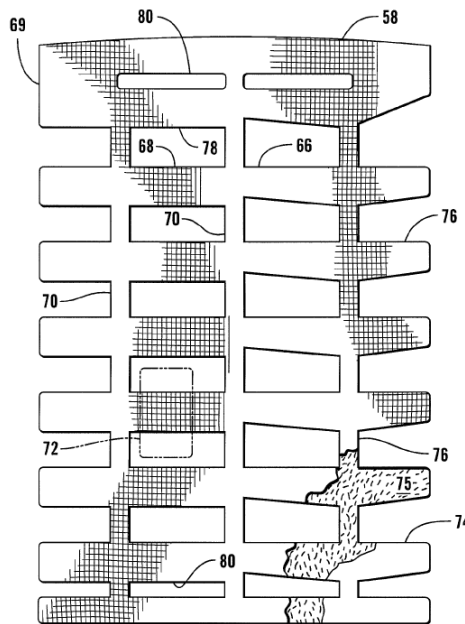


FIG. 4

The UBFA (58) includes a plurality of openings or holes (66), which holes (66) may be narrow slots (80) (i.e., *slits*) or full size openings (78). (Ex. 1004-Crye at 2:50-62.) Crye-436 further explains that this type of tactical garment is useful for “active occupations,” such as police officers and military personnel. (Ex. 1004-Crye at 1:23-29, 1:54-64.)

Crye-436 explains that its UBFA may be a single-layer or may be multi-layered, and may include, for instance, synthetic rubbers, such as chlorosulfonated

polyethylene materials (e.g., HYPALON) and woven nylon fabrics (e.g., CORDURA). (*Id.* at 2:62-3:17 and 4:44-47.) Crye-436 also discloses the use of a barrier fabric “fastened to the bearing frame assembly 58 in such a way as not to interfere with the attachment of accessories to the bearing frame assembly, but which serves to prevent the passage of dust, debris, etc., through the bearing frame assembly openings onto the inner garments of the wearer.” (*Id.* at 4:37-43.)

**B. Overview of Bennett-237 (Ex. 1015-Bennett)**

Bennett-237 is a U.S. Patent issued on December 2, 1997. Thus, Bennett-237 is prior art to the '379 patent under at least pre-AIA §§ 102(b).

Bennett-237 is in the same field of endeavor as Crye-436, and relates to a military or law enforcement garment having an interior pocket for concealing a weapon. (Ex. 1015-Bennett at 1:2-7, 3:8-19.) This interior pocket is preferably created by attaching a fabric panel to the interior of the garment by a hook-and-loop fastening system:

“The invention comprises first and second flexible fabric panels. The panels are preferably joined along one edge which serves to hingedly connect the two panels, and the panels are releasibly secured to one another in an overlying relationship along at least one additional edge thereof. Preferably the releasable securing is accomplished by means of a hook-and-loop fastener. A holster is secured to one of the panels and the other of said panels, and the other panel thus overlies the weapon, concealing it from from view. When the weapon is needed, a

pull strap is used to separate the panels and reveal the holster containing the gun.” (*Id.* at 2:33-47.)

FIG. 1 of Bennett-237 show one manners of using a hook-and-loop fastening system to attach the second fabric to the first fabric.

**FIG. 1**

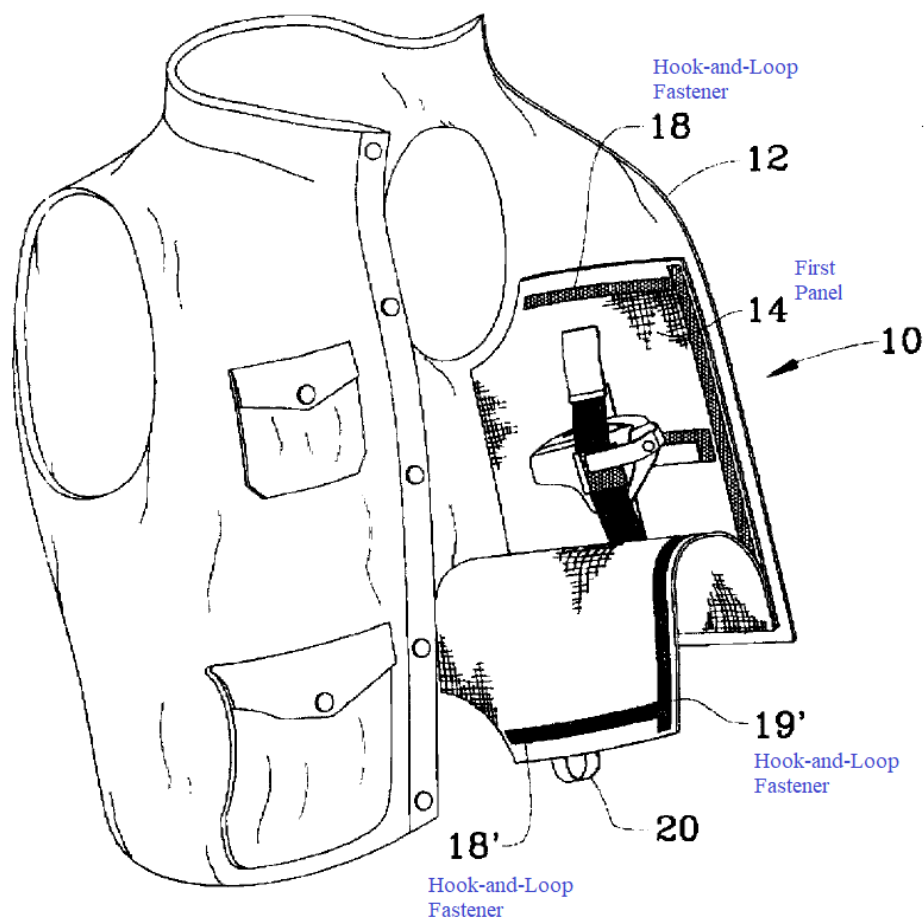


FIG. 2-6 show additional embodiments.

### C. Overview of Asher-149 (Ex. 1005-Asher)

Asher-149 is a U.S. Patent Application Publication based on U.S. Patent Application No. 11/671,054, filed February 5, 2007. Thus, Asher-149 is prior art under at least pre-AIA § 102(e).

Asher-149 is in the same field of endeavor as Crye-436, and relates to tactical garments for military and other applications:

***“The present invention relates to vests and other similar garments and, more particularly, to tactical vests and tactical garments which utilize armor plating in the front and/or back portion thereof for protection of the wea[r]er.”*** (Ex. 1005-Asher at ¶1 (emphasis added).)

For example, FIG. 1 of Asher-149 illustrates a wearable vest:

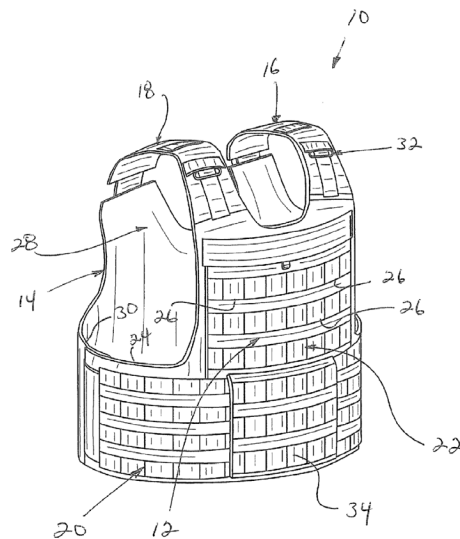


FIG. 1

Like Crye-436, the Asher-149 garment is MOLLE compatible. (*Id.* at ¶13.) As the reference explains, such garments were well known and typically included cavities for carrying armor panel/plates:

*“Tactical vests and other similar garments are well known, particularly in the military and law enforcement environments, and such vests and garments typically include pockets, pouches or other means for carrying ballistic armor plating for the protection of the wearer.”* (*Id.* at ¶2 (emphasis added).)

Indeed, since at least 2008, ballistic armor panels/plating have been subject to well-established industry standards, including the National Institute of Justice (NIJ) Ballistic Resistance of Body Armor Standard, NIJ Standard-0101.06. (Ex. 1014 or “NIJ standard”.) As the NIJ standard explains:

“As of the publication of this standard, ballistic resistant body armor suitable for full-time wear throughout an entire shift of duty is available in classification Types IIA, II, and IIIA, which provide increasing levels of protection from handgun threats. Type IIA body armor will provide minimal protection against smaller caliber handgun threats. Type II body armor will provide protection against many handgun threats, including many common, smaller caliber pistols with standard pressure ammunition, and against many revolvers. Type IIIA body armor provides a higher level of protection, and will generally protect against most pistol calibers, including many law enforcement ammunitions, and against many higher powered revolvers.” (*Id.* at 71 (emphasis added).)



Thus, no later than 2008, it was common for law enforcement garments to be equipped with one or more armor panels for preventing ballistics threats. (Ex. 1003-Pastore at ¶¶49-53.)

Asher-149 explains how its garments provide for (among other things) an internal pocket or pouch associated with the front and/or rear torso panels of the garment. (Ex. 1005-Asher at ¶16.) These pouches are accessible via conventional openings and corresponding conventional closure systems (e.g., hook-and-loop fastener elements (VELCRO)), and are sized and shaped to carry one or more armor panels/plates to protect the wearer of the garment:

“The present invention relates to an internal vest divider member or baffle member 40 associated with an internal pocket or pouch 36 associated with either or both the front and rear torso panels 22 and 28 as will be hereinafter further described. *As best illustrated in FIGS. 3 and 4, the front torso panel 22 includes an internal pocket 36 which is specifically sized and shaped for carrying either a single armor plate member or a pair of armor plate members for providing protection to the wearer when the wearer is exposed to hostile fire and other tactical dangers.* The pocket 36 is located on the inside portion of the front torso panel 22 (FIG. 3) and can be formed by attaching or otherwise overlaying another fabric member such as the member 38 (FIGS. 3 and 4) to the inside portion of the front torso panel 22 and providing an opening 40 through such member 38 for accessing the pocket or cavity 36 formed therebetween. The fabric member 38 may

comprise a mesh type material as illustrated in FIG. 3, or such member may be made of any other suitable material. *Access to the pocket 36 is provided by forming a slit, slot or separation along a sufficient portion of the inner panel member 38 such as the slot or opening 41 illustrated in FIG. 3 such that a single armor plate member or a pair of armor plate members can be inserted therethrough for operative positioning within the pocket 36. The opening or slot 41 can be maintained in a closed position through the use of any suitable conventional means such as conventional hook and loop fastener elements 42 associated with the respective end portions of the inner fabric portions 38A and 38B of the internal cover or panel member 38 adjacent the opening 41 which can be overlapped and easily secured to each other to close access to the pocket 36. Other suitable fastening means for accomplishing this task can likewise be utilized such as conventional snap fasteners, a zipper or button arrangement, and other suitable fastening means.*” (*Id.* at ¶16 (emphasis added).)

#### **VIII. SPECIFIC GROUNDS FOR PETITION**

##### **A. GROUND 1: Claims 1, 3-7, 10-11, 13-14, 17-19, and 21-23 are rendered obvious by Crye-436**

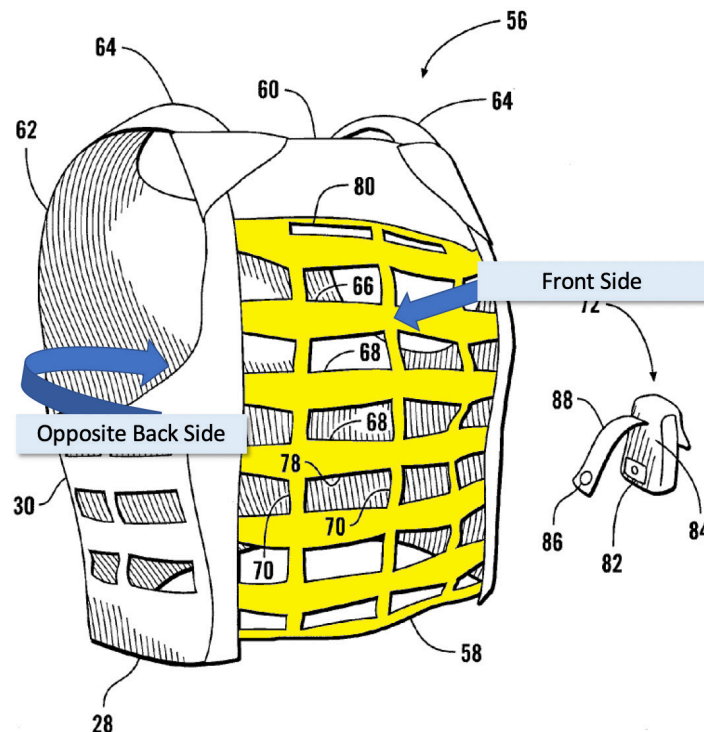
For Ground 1, the prior art consists of Crye-436. As shown below, Crye-436 discloses, teaches, and suggests all limitations of claims 1, 3-7, 10-11, 13-14, 17-19, and 21-23 of the '379 patent, thereby rendering those claims obvious.

**[1-PRE] An attachment system, comprising:**

The preamble is not limiting. Further, Crye-436 discloses an attachment system whether or not the preamble is limiting, as shown below.

**[1a] a platform having a front side and an opposite back side,**

Crye-436 discloses this limitation. Specifically, Crye-436 discloses a platform (called a unitary bearing frame assembly (“UBFA”) (58)) having a front side and an opposite back side. The front side is shown in FIG. 3, with the corresponding opposing back side of the UBFA being on the “inside” of the garment that is illustrated in the figure:



(See, e.g., Ex. 1004-Crye at FIG. 3; see also FIG. 4; Ex. 1003-Pastore at ¶64.)

Thus, Crye-436 discloses this limitation.

**[1b] the platform comprising laminated layers including at least one fabric layer,**

Crye-436 discloses this limitation. Specifically, Crye-436 discloses that the UBFA (58) may be “a composite of multiple layers.” (Ex. 1004-Crye at 4:44-45.)

In a multi-layer configuration, the layers may be laminated together:

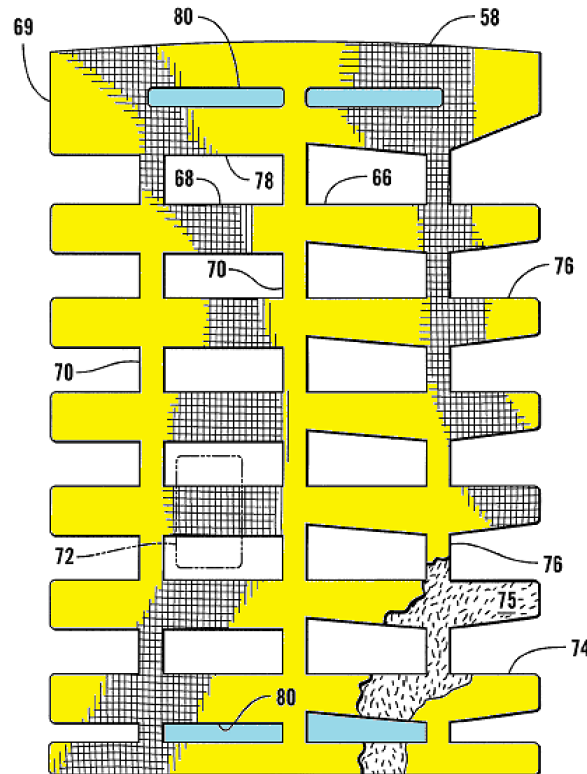
“[UBFA (58)] is comprised of a substrate 74 to which an exterior layer 76 is affixed. ... *The exterior layer may be attached to the substrate by a heat activated adhesive*, for example the BEMIS themoplastic adhesive film manufactured by CDNT Company d/b/a Can-Do National Tape 195 Polk Avenue, Nashville, Tenn. *The adhesive 75 may be applied as a thin film sheet between the substrate material and the exterior layer material, the composite being activated by exposure to temperatures of about 300 degrees F.*” (Ex. 1004-Crye at 2:64-3:17 (emphasis added).)

As the above excerpt shows, the UBFA may be a laminated body comprising a substrate layer and an exterior layer. For instance, by applying an adhesive between the substrate material and the exterior layer, and then heating, a laminate of the two materials is formed. (Ex. 1003-Pastore at ¶¶66-67.) Further, the substrate layer and/or the exterior layer may be made of fabric. (*Id.* at ¶¶68-71.)

Thus, Crye-436 discloses this limitation.

**[1c] the platform having a plurality of slits therethrough defined and bound by edges of the layers fused together to have increased wear and abrasion resistance,**

Crye-436 discloses this limitation. Specifically, Crye-436 discloses UBFA (58), which is a platform with slits therethrough (highlighted blue in FIG. 4):



**FIG. 4**

“The holes 66 also include narrow slots 80, for example at the top of the bearing frame assembly 58, which are as wide as the full height openings 78, but which are merely of sufficient height to allow a strap or other attachment element of an accessory to access the horizontal band partially defined by the slot 80.” (Ex. 1004-Crye at 2:56-61.)

The Crye-436 slits may be produced by, for instance, laser cutting of the UBFA:

“Once the composite is thus formed, it may be cut to the desired configuration to add the through holes of the desired shape and location. The material may be die cut or laser cut, formed in a heat stamping process or in any way that would be used for cutting fabric. It will be observed that although the holes may be arranged in a regular array to match the arrangement of a PALS system of webbing, it is not necessary that the horizontal bands be at the same level as they progress across the garment, and may be positioned in any arrangement desired.” (Ex. 1004-Crye at 3:17-26 (emphasis added).)

The slits of the '379 patent may be made in an identical manner:

“The slits 36 can be formed in any manner suitable for the anticipated application, as a non-limiting example, by knife or die cutting, using a button hole machine, or more preferably, **by laser cutting**.” (Ex. 1001 at 7:33-36 (emphasis added); *see also id.* at 10:5-10.)

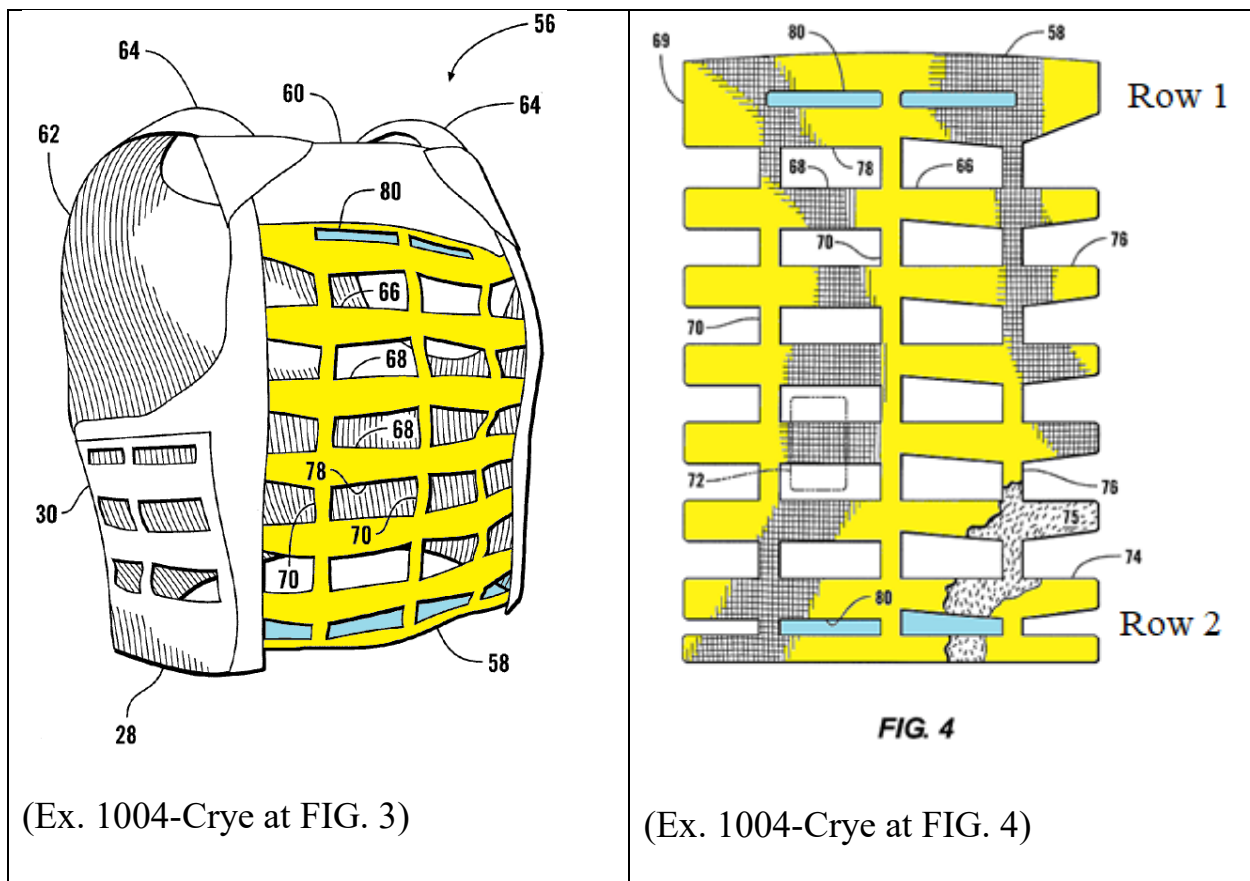
“As another preferred aspect, the fabric layers comprising the edges bounding *the slits are fused together, e.g., using a laser cutting process for forming the slits, so as to be hardened* but at least semi-flexible to allow insertion of flat straps and tabs through the slits, and such that the edges will not fray or wear significantly under expected use.” (*Id.* at 3:32-37 (emphasis added).)

Thus, when using laser cutting to make slits in the Crye-436 UBFA (platform), those slits would be “defined and bound by edges of the layers fused together to have increased wear and abrasion resistance,” as confirmed by the '379 patent itself. (*See also* Ex. 1003-Pastore at ¶¶73-76.)

Thus, Crye-436 discloses this limitation.

**[1d] the slits arranged in a predetermined pattern of aligned and spaced apart rows,**

Crye-436 discloses this limitation. Specifically, Crye-436 shows that the slits (again highlighted blue) are arranged in a predetermined pattern of aligned and spaced apart rows:



As the figures above show, the slits (80) are in a predetermined pattern and are in spaced apart rows. (*See also* Ex. 1004-Crye at FIG. 2.) Further, the slits are aligned as the slits on the top row are aligned with the slits on the bottom row. Thus, Crye-

436 discloses “the slits arranged in a predetermined pattern of aligned and spaced apart rows.” (Ex. 1003-Pastore at ¶¶78-79.)

Further, even if limitation 1d is inappropriately and narrowly construed to require adjacent rows of aligned slits, Crye-436 also discloses, teaches, and suggests such adjacent rows of aligned slits. Indeed, Crye-436 discloses that any number of slits (80) or full height openings (78) can be used with the garment, and it is preferred to have a ratio of openings to total surface area of from 25 to 75%:

“The equipment carrying garment of the present invention offers a lightweight attachment structure which minimizes the material used by reducing the garment to a skeleton of horizontal bands connected by a few vertical bands.... *The layup is cut to define an array of holes delimiting horizontal bands interrupted at regular intervals by vertical bands. Such an arrangement may not have loops as such, but still is compatible with many PALS accessories*, and is very lightweight. It is an object of the present invention to provide a load supporting garment *which is compatible with the MOLLE system which is very lightweight*. It is another object of the present invention to provide a load supporting garment which can be produced to accommodate attachments *at any desired location*.” (Ex. 1004-Crye at 1:54-2:3 (emphasis added).)

“The ratio of opening area to total surface area depends on whether the cut pattern of openings is carried to the edge of the sample, as shown in FIG. 4, or is terminated within the perimeter to maintain a solid border around the sample. If the cut pattern is carried out consistently, in a preferred embodiment 43% of the material is removed by the cut holes.



It is possible to adjust the size of the uncut material and the cut pattern so that the ratio is as little as 25% or as large as 75%.” (*Id.* at 4:18-25.)

Thus, Crye-436 discloses, teaches, and suggests that its garments may include only slits, only full height openings, or any suitable combination of slits and full height openings, i.e., any appropriate combination of slits and/or full size openings may be used.<sup>3</sup> (Ex. 1003-Pastore at ¶¶80-81.) Indeed, at least by stating “[i]t is possible *to adjust* the size of the uncut material,” Crye-436 indicates that any appropriate combination of slits and/or full size openings may be used. (*Id.* at ¶81.) Further, a UBFA consisting only of slits may realize the 25-75% opening to total surface area preferred ratio of Crye-436. (Ex. 1012.) Thus, even if limitation 1d required adjacent rows of aligned slits (it does not), Crye-436 also discloses, teaches, and suggests limitation 1d, i.e., “the slits arranged in a predetermined pattern of aligned and spaced apart rows.” (Ex. 1003-Pastore at ¶¶81-82.)

**[1e] the slits being configured to receive flexible, generally flat straps or tabs therethrough between the front side and the back side to attach at least one holder to the platform, and**

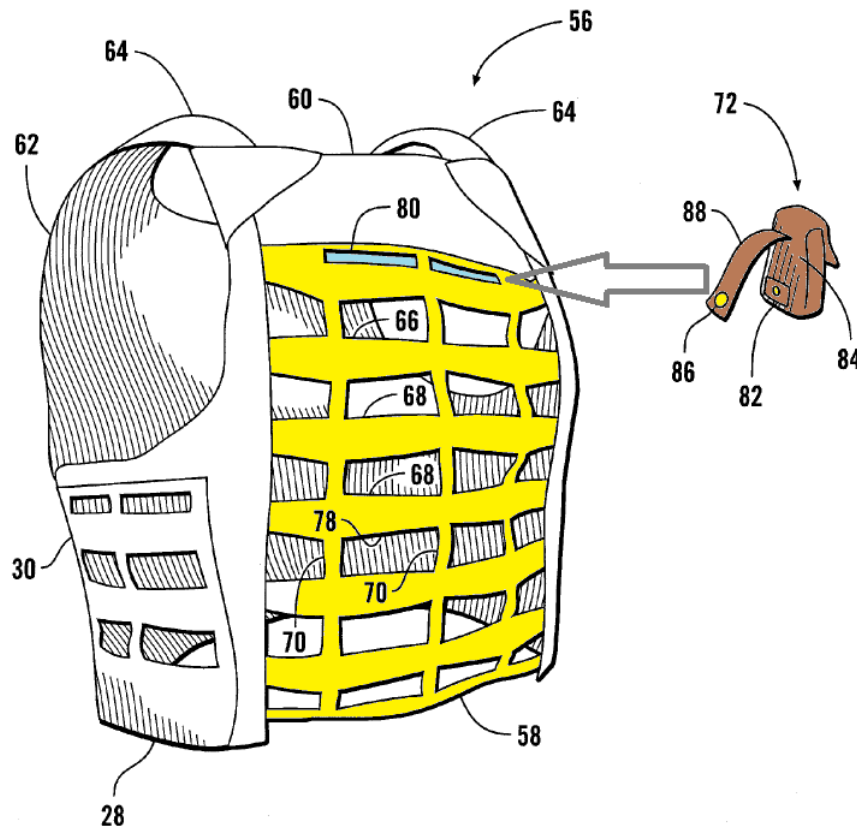
Crye-436 discloses this limitation. In particular, Crye-436 discloses slits arranged to receive generally flexible straps or tabs therethrough to attach at least

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<sup>3</sup> Carlson (Ex. 1008) also shows that a MOLLE compatible garment may include all slits as its openings.

one holder to the platform. As shown and described relative to FIG. 3, for instance, Crye-436 discloses slits in a UBFA (58) that are configured to receive a strap (88) of a pouch/accessory (72) (a holder) to attach the pouch (72) to the platform:

*“An accessory 72, as shown in FIG. 3, may be attached to any desired horizontal band of the bearing frame assembly 58. ... A strap 88 is fastened to the accessory rear wall spaced from the loop. A second part of the two-part fastener is configured to mate with the first part of the two-part fastener. The second part is fixed to the strap 88, so the strap is capable of passing through the loop 82, and around the loop to bring the first part and the second part of the fastener into engagement to retain the horizontal band between the strap and the accessory rear wall. The accessory 72 may thus readily be mounted to the garment 20, having loops, or to portions of the garment 56 having horizontal bands without loops.”* (Ex. 1004-Crye at 4:48-67 (emphasis added).)



Thus, Crye-436 discloses a holder (pouch or accessory (72)) that is removably fastened to the UBFA (platform) of the Crye-436 garment using (in part) straps, and Crye-436 further discloses that the UBFA's slits may be used for this purpose. (Ex. 1003-Pastore at ¶¶83-85.)

Thus, Crye-436 discloses this limitation.

**[1f] the platform being supported by and comprising an element of a carrier configured to be worn against a portion of a user's body,**

Crye-436 discloses this limitation. Specifically, Crye-436 discloses that UBFA (58) is part of and supported by a carrier configured to be worn against a portion of a user's body. In the specific embodiment shown in FIG. 3, the "carrier"

takes the form of a vest garment that is worn by a person against his or her body, with the back side of the UBFA facing the carrier and the front side of the UBFA facing outwardly for carrying the at least one holder (e.g., pouch 72) at a desired location adjacent to the front side.<sup>4</sup> (Ex. 1004-Crye at 1:18-20 (“The present invention relates to garments generally, and more particularly to lightweight utility garments which can accommodate various accessory elements”); 2:23-32 (describing an “equipment carrying garment”); FIGS. 2-3; *see also* Ex. 1003-Pastore at ¶¶86-88.)

Thus, Crye-436 discloses this limitation.

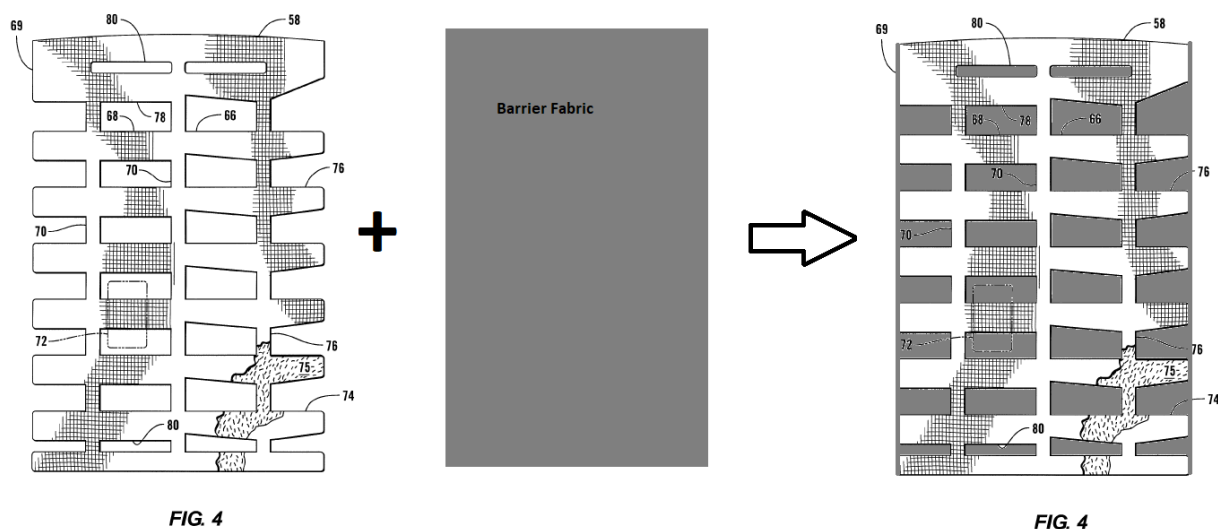
**[1g] the back side and at least one element of the carrier or a backing element bounding a generally flat cavity through which the back side can be accessed.**

Crye-436 discloses, teaches, and suggests this limitation. Specifically, Crye-436 discloses that a barrier fabric may be “fastened to the bearing frame assembly 58 in such a way as not to interfere with the attachment of accessories to the bearing frame assembly, but which serves to prevent the passage of dust, debris, etc., through the bearing frame assembly openings onto the inner garments of the wearer.” (Ex.

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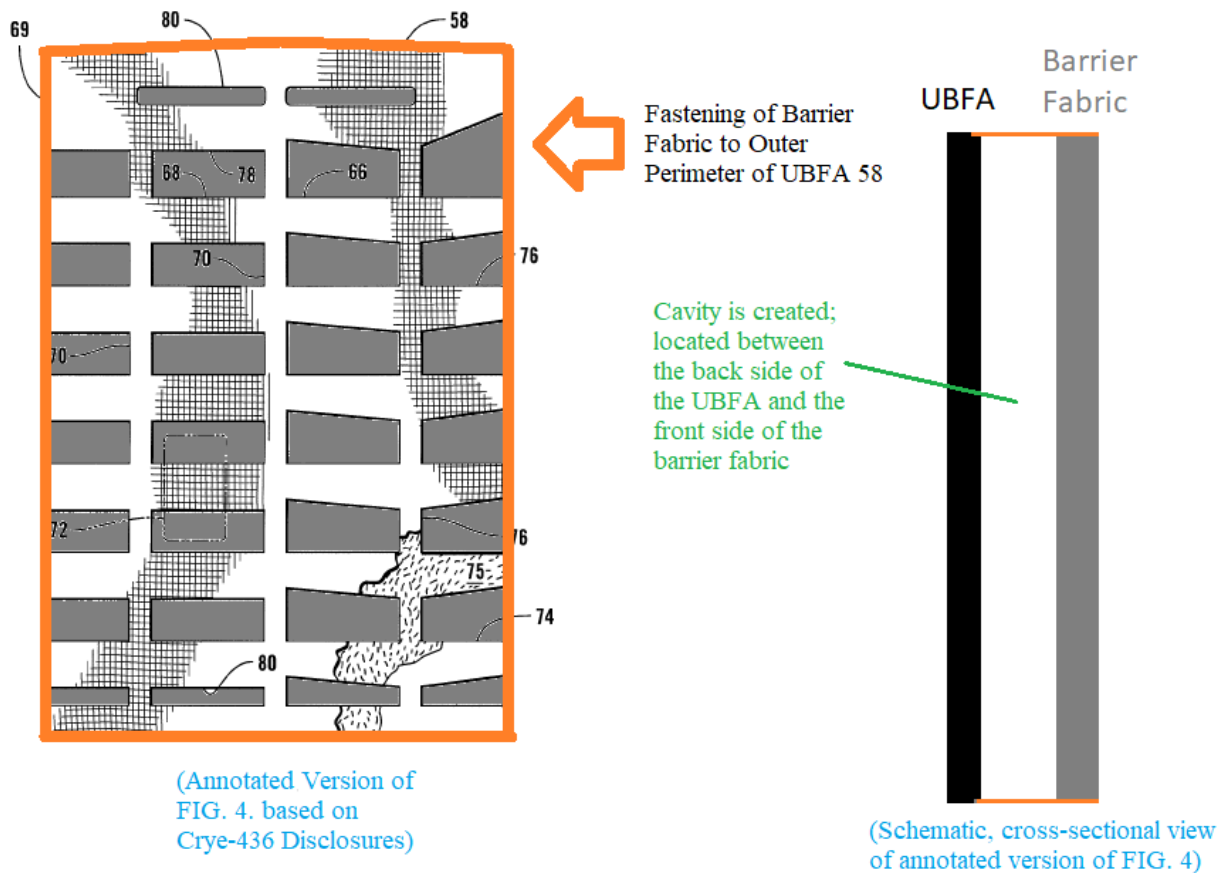
<sup>4</sup> Per the ’379 patent, the term “carrier” is the same as “carrier garment,” and includes things like “vests, cummerbunds, belts, and the like, for carrying holders.” (Ex. 1001 at 1:28-33.)

1004-Crye at 4:37-43.) One potential method of fastening the Crye-436 barrier fabric to the Crye-436 UBFA is shown in the below diagram, which is based on FIG. 4 plus the barrier fabric disclosure of Crye-436 (the gray barrier fabric portion is not illustrated in the figures of Crye-436; instead it is described in the text). (Ex. 1003-Pastore at ¶¶90-91.)



While Crye-436 does not expressly state where to fasten the barrier fabric to the UBFA, Crye-436 does disclose that its barrier fabric should be attached to the UBFA “in such a way as not to interfere with the attachment of accessories to the bearing frame assembly, but which serves to prevent the passage of dust, debris, etc., through the bearing frame assembly openings onto the inner garments of the wearer.” (Ex. 1004-Crye at 4:37-43.) In doing so, it would have been obvious to attach the barrier fabric of Crye-436 to the outer perimeter of the UBFA so as to accomplish the stated goal of attaching the barrier fabric in such a “way as not to interfere with the

attachment of accessories to the bearing frame assembly, but which serves to prevent the passage of dust, debris, etc., through the bearing frame assembly openings onto the inner garments of the wearer.” (Ex. 1003-Pastore at ¶¶92-93.) By attaching the barrier fabric to the outer perimeter of the UBFA, any debris passed through the openings (66) of the UBFA would be fully contained. Attaching to the outer perimeter of the UBFA also would not interfere with attachment of accessories because the slits (80) and/or full size openings (78) would remain available for attachment. Further, by fastening the barrier fabric to the UBFA (58) in such a manner, a generally flat cavity would be created, as shown by the below example illustration. (Ex. 1003-Pastore at ¶¶94-96.)



This generally flat cavity is accessible by the full size openings (78) of Crye-436's platform. Specifically, a POSITA would know that a person's finger(s) would access the backside of the platform via these full size openings to, for instance, facilitate attachment of MOLLE compatible accessories to the platform by weaving the straps of such an accessory to the platform. (Ex. 1003-Pastore at ¶¶96-98 (citing Ex. 1001 at 4:37-43 (the "lightweight barrier fabric" is "fastened to the bearing frame assembly 58 *in such a way as not to interfere with the attachment of accessories to the bearing frame assembly*"); and 4:48-67 (explaining how straps are used to attach to Crye-436's MOLLE compatible platform)).)

Thus, Crye-436 discloses, teaches, and suggests this limitation and renders claim 1 obvious.

**[CLAIM 3] The attachment system of claim 1, wherein at least one of the layers comprises an adhesive.**

Crye-436 discloses this this limitation. Specifically, Crye-436 discloses that the layers of its UBFA may be laminated together with adhesives such that at least one of the layers includes an adhesive:

“The exterior layer may be attached to the substrate by a heat activated adhesive, *for example the BEMIS thermoplastic [sic] adhesive film manufactured by CDNT Company d/b/a Can-Do National Tape 195 Polk Avenue, Nashville, Tenn. The adhesive 75 may be applied as a thin film sheet between the substrate material and the exterior layer material*, the composite being activated by exposure to temperatures of about 300 degrees F.” (Ex. 1004-Crye at 3:10-17 (emphasis added).)

(See also Ex. 1003-Pastore at ¶100.)

Thus, Crye-436 discloses this limitation, and renders claim 3 obvious.

**[CLAIM 4] The attachment system of claim 1, wherein at least one of the layers comprises a synthetic rubber compound.**

Crye-436 discloses this limitation. Specifically, Crye-436 discloses that the substrate (74) (a layer of the UBFA (58)) may include a synthetic rubber compound:

“The substrate 74 may be formed of TEGRIS® material, a polypropylene thermoplastic composite with excellent impact resistance and stiffness and lightweight composition, manufactured by



Milliken & Company of Spartanburg, S.C., or a material similar to the chlorosulfonated polyethylene material formerly manufactured by DuPont under the trademark HYPALON, which has a woven fabric core, and is covered in rubber.” (Ex. 1004-Crye at 2:64-3:4 (emphasis added).)

Chlorosulfonated polyethylenes, such as HYPALON, are well-known synthetic rubber compounds. (Ex. 1009 at 5:60-67; *see also* Ex. 1003-Pastore at ¶101.)

Thus, Crye-436 discloses this limitation and renders claim 4 obvious.

**[CLAIM 5] The attachment system of claim 4, wherein the platform comprises a woven nylon fabric laminated to the synthetic rubber compound.**

Crye-436 discloses this limitation. Specifically, Crye-436 discloses that the UBFA may be a laminate comprising the substrate layer (74) and the exterior layer (76):

“As shown in FIG. 4, the bearing frame assembly is comprised of a substrate 74 to which an exterior layer 76 is affixed.... The exterior layer may be attached to the substrate by a heat activated adhesive.... The adhesive 75 may be applied as a thin film sheet between the substrate material and the exterior layer material, the composite being activated by exposure to temperatures of about 300 degrees F.” (Ex. 1004-Crye at 2:62-3:17.)

The substrate layer may be made of chlorosulfonated polyethylene, which is a synthetic rubber. (*See supra* claim 4.) The exterior layer may be a woven nylon fabric:

“The exterior layer should be a lightweight, printable, and abrasion resistant material, such as the CORDURA® nylon fabric manufactured by the Invista subsidiary of Koch Industries, Inc.” (Ex. 1004-Crye at 3:5-8.)

CORDURA is a known woven nylon fabric:

“Woven fabrics produced from bulky air textured yarns are certified as CORDURAO® branded fabrics (CORDURA® is a registered trademark for durable fabrics of INVISTA S. á r. I., Three Little Falls Centre, 2801 Centreville Road, Wilmington, Del., 19808, USA).” (Ex. 1011 at ¶3.)

Thus, Crye-436 discloses that UBFA (58) (the platform) may include “a woven nylon fabric” (the exterior CORDURA layer) laminated to a synthetic rubber compound (the chlorosulfonated polyethylene substrate layer). (Ex. 1003-Pastore at ¶¶102-03.)

Thus, Crye-436 discloses this limitation and renders claim 5 obvious.

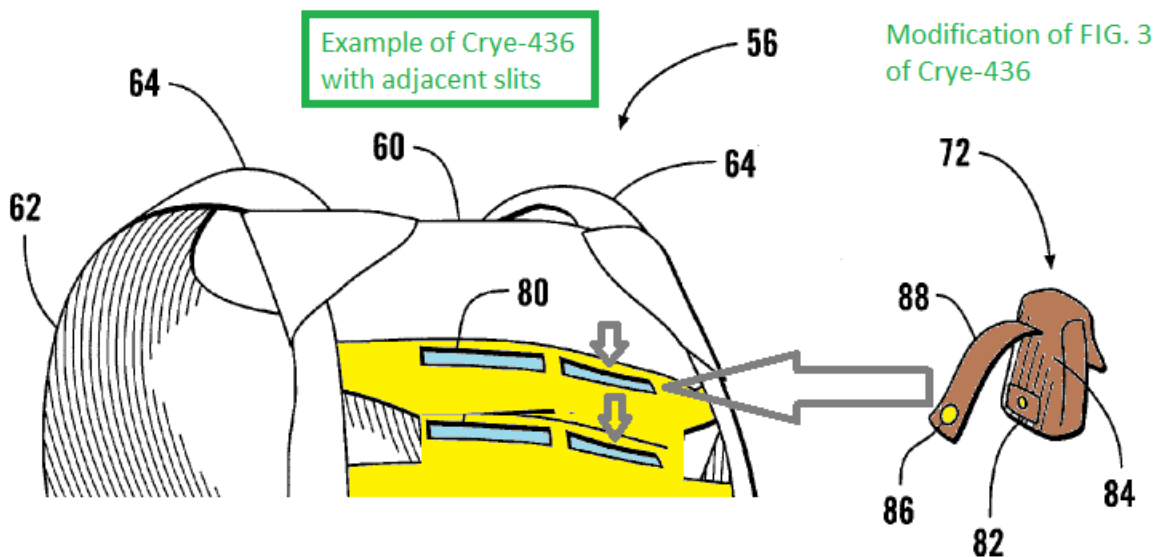
**[CLAIM 6] The attachment system of claim 1, wherein the edges are hardened by laser fusion.**

Crye-436 discloses this limitation. As explained above relative to limitation 1c, both the '379 patent and Crye-436 may employ laser cutting to make slits in the laminated platform / UBFA. In doing so, the slit “edges are hardened by laser fusion,” as conceded by the '379 patent. (Ex. 1003-Pastore at ¶104.)

Thus, Crye-436 discloses this limitation and renders claim 6 obvious.

**[CLAIM 7] The attachment system of claim 1, further comprising at least one strap woven through selected ones of the slits attaching a holder to the platform.**

Crye-436 discloses, teaches, and suggests this limitation. As explained above relative to limitation 1d, Crye-436 discloses, teaches, and suggests using any suitable combination of slits (80) and full height openings (78) with its UBFA, including adjacent rows of aligned slits. (*See* limitation 1d.) In such an arrangement, when a strap of a pouch (e.g., strap (88) of accessory pouch (72) of Crye-436) is attached to the UBFA, the strap would be woven through selected ones of the slits to attach that pouch (holder) to the UBFA per standard MOLLE practice, as shown by the below illustrative example.



(*See also* Ex. 1003-Pastore at ¶105.)

Thus, Crye-436 discloses, teaches, and suggests the limitation “at least one strap woven through selected ones of the slits attaching a holder to the platform,” and Crye-436 renders claim 7 obvious.

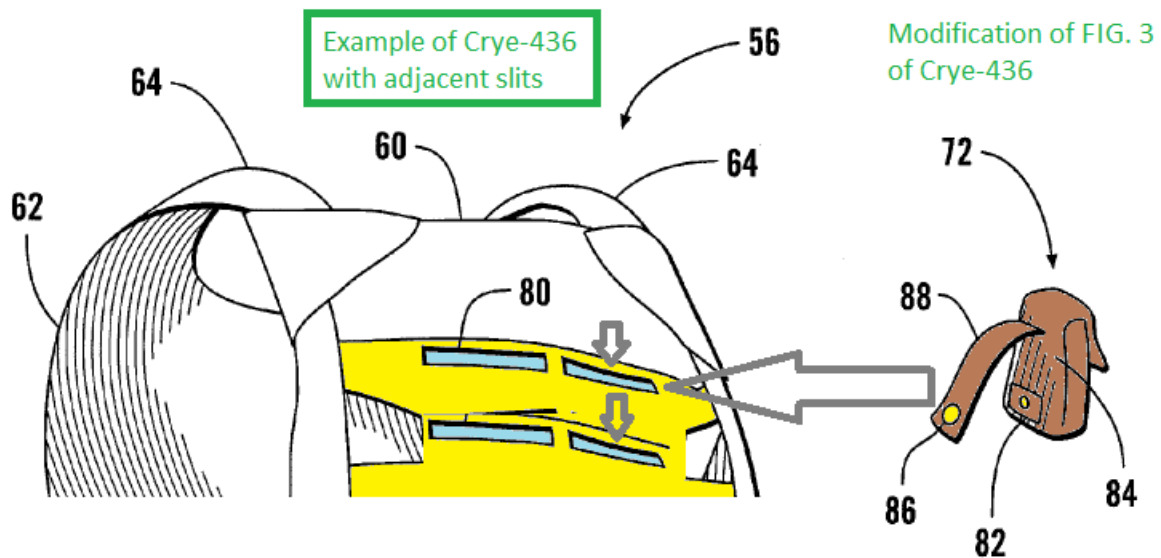
**[CLAIM 10] The attachment system of claim 1, wherein the carrier comprises a vest, a cummerbund, or a belt.**

Crye-436 discloses this limitation. As shown above with respect to limitation 1a, FIGS. 3-4 of Crye-436 show that the garment may be a vest. (Ex. 1003-Pastore at ¶106.)

Thus, Crye-436 discloses this limitation and renders claim 10 obvious.

**[CLAIM 11] The attachment system of claim 1, further comprising a holder configured for holding at least one object or article, having a strap extending therefrom and woven through at least two of the slits interlockingly attaching the holder to the platform.**

Crye-436 discloses, teaches, and suggests this limitation. As explained above relative to limitation 1d and claim 7, Crye-436 discloses, teaches, and suggests using any suitable combination of slits (80) and full height openings (78) with its UBFA, including adjacent rows of aligned slits. In such an arrangement, when a strap of a pouch (e.g., the strap (88) of accessory pouch (72) of Crye-436) is attached to the UBFA, the strap would be woven through selected ones of the slits to attach that pouch (holder) to the UBFA per standard MOLLE practice, as shown by the below illustrative example.



Thus, Crye-436 discloses, teaches, and suggests the limitation “further comprising a holder configured for holding at least one object or article, having a strap extending therefrom and woven through at least two of the slits.” (Ex. 1003-Pastore at ¶107.)

Crye-436 also discloses that its example holder (72) is “interlockingly attach[ed]” to the platform. As shown in FIG. 3, the example holder (72) includes a “two-part fastener 86 such as a snap.” (Ex. 1004-Crye at 4:56-58.) Crye-436 goes on to explain:

“A second part of the two-part fastener is configured to mate with the first part of the two-part fastener. The second part is fixed to the strap 88, so the strap is capable of passing through the loop 82, and around the loop to bring the first part and the second part of the fastener into engagement to retain the horizontal band between the strap and the accessory rear wall. The accessory 72 may thus readily be mounted to

the garment 20, having loops, or to portions of the garment 56 having horizontal bands without loops.” (*Id.* at 4:59-67.)

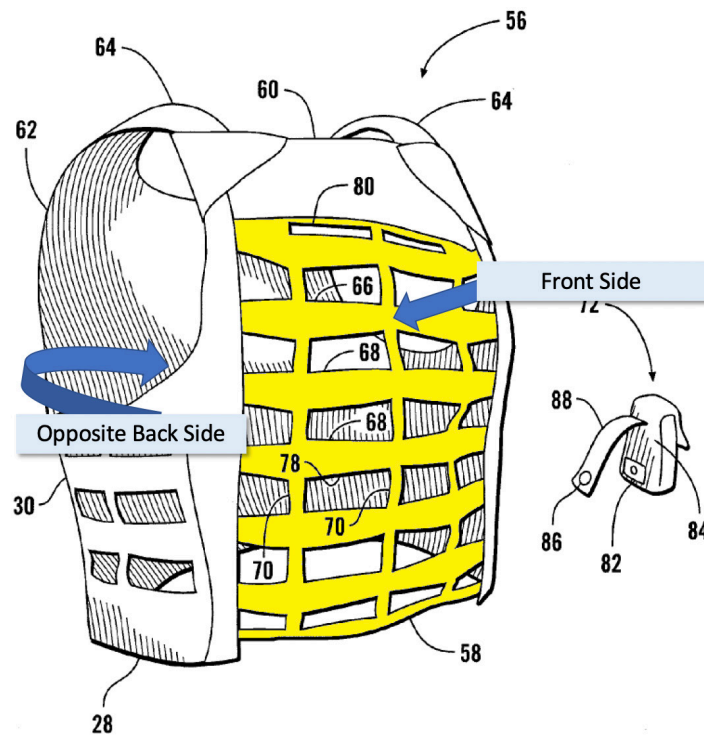
In other words, the strap (88) and two-part fastener (86) of the holder (72) Crye-436 interlockingly attach the holder to the platform (UBFA (58)). (Ex. 1003-Pastore at ¶108.)

Thus, Crye-436 discloses, teaches, and suggests this limitation and renders claim 11 obvious.

**[13-PRE] An attachment system for removably attaching at least one holder to a carrier configured for wear on a human body, the carrier having at least one outer surface oriented to face away from a body on which the carrier is worn, the attachment system comprising:**

The preamble of claim 13 appears to be limiting as it recites structure for later limitations of claim 13. *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (quoting *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999)).

Crye-436 discloses the preamble whether or not it is a limitation. Specifically, Crye-436 discloses a garment having a unitary bearing frame assembly (UBFA):



(See, e.g., Ex. 1004-Crye at FIG. 3; see also FIG. 4.) As shown in the above figure, the garment is configured to be worn by a human and the outer surface of the garment is oriented away from the wearer. The figure also shows a removable holder (72) (“pouch” or “accessory”) that can be attached to the garment. (Ex. 1004-Crye at FIG. 3 & 4:48-67 (explaining how the accessory is readily mounted to the garment using a fastening system including a strap such that the accessory can also be easily removed); see also limitation 1d (explaining that Crye-436 discloses a garment featuring MOLLE compatibility); limitation 1e (explaining that the slits of the garment are configured to receive flat straps or tabs of an accessory); and claims 7 and 11; see also Ex. 1003-Pastore at ¶¶110-11.)

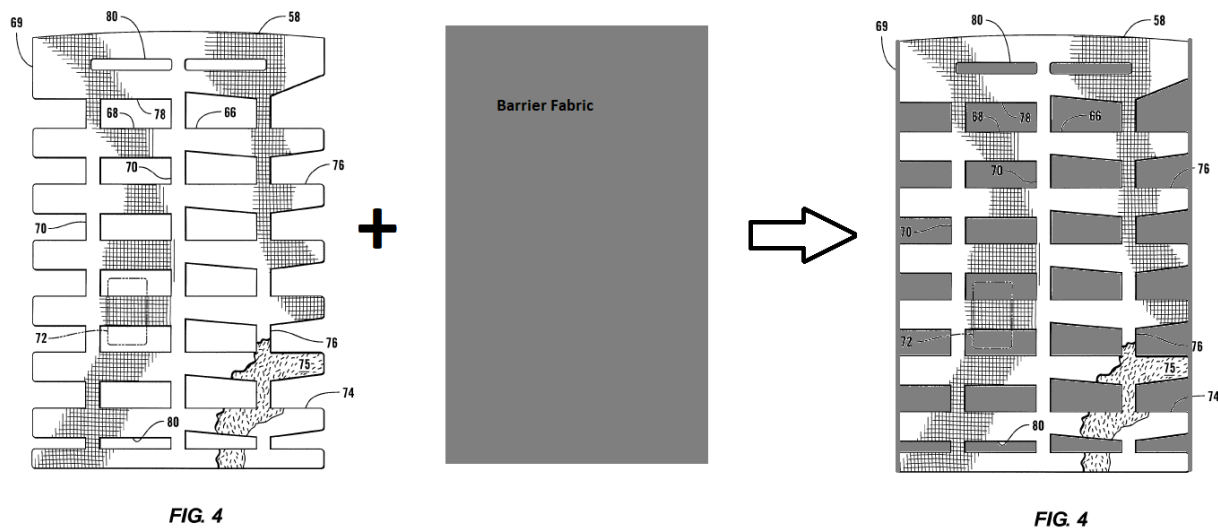
Thus, Crye-436 discloses the preamble, whether or not it is a limitation.

**[13a] a platform supported in an upstanding orientation on the carrier in covering relation to a surface of the carrier or an opposing backing element to bound a generally flat cavity therebetween,**

Crye-436 discloses a unitary bearing frame assembly (UBFA) (58) which is a platform. (*See also* limitation 1a.) The UBFA is supported in an upstanding relating to a carrier (e.g., a garment such as a vest) as shown by FIG. 3.

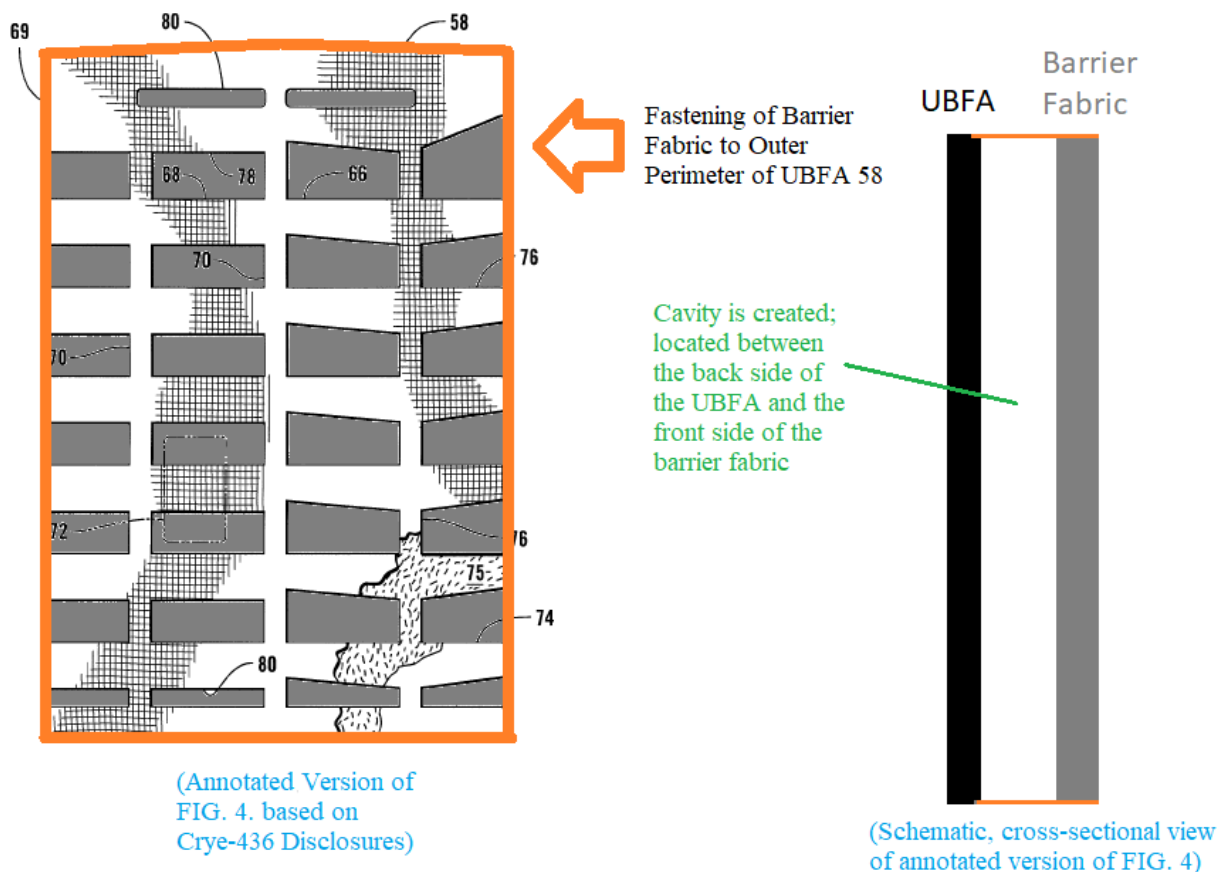
Further, and as described above relative to limitation 1g, Crye-436 discloses that a barrier fabric may be “fastened to the bearing frame assembly 58 in such a way as not to interfere with the attachment of accessories to the bearing frame assembly, but which serves to prevent the passage of dust, debris, etc., through the bearing frame assembly openings onto the inner garments of the wearer.” (Ex. 1004-Crye at 4:37-43.) One potential method of fastening the Crye-436 barrier fabric to the Crye-436 UBFA is shown in the below diagram, which is based on FIG. 4 plus the barrier fabric disclosure of Crye-436 (the gray barrier fabric portion is not illustrated in the figures of Crye-436; instead it is described in the text).





While Crye-436 does not expressly state where to fasten the barrier fabric to the UBFA, Crye-436 does disclose that its barrier fabric should be attached to the UBFA “in such a way as not to interfere with the attachment of accessories to the bearing frame assembly, but which serves to prevent the passage of dust, debris, etc., through the bearing frame assembly openings onto the inner garments of the wearer.” (Ex. 1004-Crye at 4:37-43; Ex. 1003-Pastore at ¶¶112-13.) In doing so, it would have been obvious to attach the barrier fabric of Crye-436 to the outer perimeter of the UBFA so as to accomplish the stated goal of attaching the barrier fabric in such a “way as not to interfere with the attachment of accessories to the bearing frame assembly, but which serves to prevent the passage of dust, debris, etc., through the bearing frame assembly openings onto the inner garments of the wearer.” (Ex. 1003-Pastore at ¶¶112-13.) By attaching the barrier fabric to the outer perimeter of the UBFA, any debris passed through the openings (66) of the UBFA would be fully

contained. Attaching to the outer perimeter of the UBFA would not interfere with attachment of accessories because the slits (80) and/or full size openings (78) would remain available for attachment. Further, by fastening the barrier fabric to the UBFA (58) in such a manner, a generally flat cavity would be created, as shown by the below example illustration. (Ex. 1003-Pastore at ¶113.)



Thus, Crye-436 also discloses, teaches, and suggests that the UBFA (platform) may be in “covering relation to an opposing backing element to bound a generally flat cavity therebetween.”

Hence, Crye-436 discloses, teaches, and suggests this limitation.

**[13b] the platform having a front side facing outwardly, an opposite back side facing the cavity,**

Crye-436 discloses this limitation. Crye-436's UBFA (58) is a platform having a front side facing outwardly and an opposite back side facing the cavity, as explained above with respect to limitations 1a and 13a. (Ex. 1003-Pastore at ¶115.)

**[13c] the platform comprising laminated layers wherein at least one of the layers is a fabric, and**

Crye-436 discloses this limitation for the reasons explained above with respect to limitation 1b. (Ex. 1003-Pastore at ¶117.)

**[13d] a plurality of slits defined and bound by fusion hardened edges of the laminated layers,**

Crye-436 discloses this limitation for the reasons explained above with respect to limitation 1c and claim 6. (Ex. 1003-Pastore at ¶118.)

**[13e] the slits arranged in a predetermined pattern of aligned and spaced apart rows.**

Crye-436 discloses, teaches, and suggests this limitation for the reasons explained above with respect to limitation 1d. (Ex. 1003-Pastore at ¶119.)

Thus, Crye-436 renders obvious claim 13.

**[CLAIM 14] The attachment system of claim 13, further comprising at least one holder configured for holding an article or object, having at least one generally flat, flexible tab or strap extending therefrom and extending through at least one of the slits and attached to the platform or the holder to releasably secure the holder adjacent to the front side of the platform.**

Crye-436 discloses this limitation for the same reasons described above with respect to limitation 1e and claims 7 and 11. (*See also* Ex. 1004-Crye at FIG. 3 (illustrating an accessory [holder] (72) with a strap that can be releasably secured to the front side of the Crye-436 garment's platform by extending the strap through one or more slits in the platform); claims 7 & 11; Ex. 1003-Pastore at ¶121.)

Thus, Crye-436 renders obvious claim 14.

**[CLAIM 17] The attachment system of claim 14, wherein the at least one generally flat, flexible tab or strap comprises a strap having one end attached to the holder and woven through at least two of the slits, and a second end releasably fastened to the holder.**

Crye-436 discloses, teaches, and suggests this limitation for the reasons provided above relative to claims 7 and 11. (Ex. 1003-Pastore at ¶122.)

Thus, Crye-436 renders obvious claim 17.

**[CLAIM 18] The attachment system of claim 14, wherein the holder comprises a pouch.**

Crye-436 discloses this limitation. Specifically, Crye-436 expressly refers to callout (72) in FIG. 3 as a “pouch.” (Ex. 1004-Crye at FIG. 3 & 2:37-40; Ex. 1003-Pastore at ¶124.)

Thus, Crye-436 renders obvious claim 18.

**[19-PRE] An attachment system for supporting holders on a carrier,**

Crye-436 discloses the preamble for the same reasons explained above with respect to the preamble of claim 13 whether or not the preamble is a limitation. (Ex. 1003-Pastore at ¶125.)

**[19a] including a platform comprising a front side and laminated layers having a plurality of slits therethrough arranged in a predetermined pattern of aligned and spaced apart rows; and**

Crye-436 discloses, teaches, and suggests this limitation for the same reasons explained above with respect to limitations 1a-1d. (Ex. 1003-Pastore at ¶¶126-27.)

**[19b] the platform having a back side opposite the front side and opposing a surface of the carrier or a backing element to enclose a generally flat cavity therebetween generally coextensive with the platform,**

Crye-436 discloses, teaches, and suggests this limitation for the same reasons explained above with respect to limitations 1g and 13a. (Ex. 1003-Pastore at ¶129.) As those explanations show, a POSITA would have attached the barrier fabric to the outer perimeter of the UBFA, which results in “a back side opposite the front side and opposing a surface of ... a backing element to enclose a generally flat cavity therebetween generally coextensive with the platform.”

**[19c] the slits extending through the platform to the cavity and**

Crye-436 discloses this limitation. Specifically, as explained above with respect to limitation 13a, 13d, and 13e, Crye-436 discloses, teaches, and suggests a cavity disposed behind the UBFA (58) such that the slits of Crye-436 extend from

the front of the platform on one side to the back side of the platform to which the barrier fabric is attached; thus, the slits extend through the platform to the cavity. (Ex. 1003-Pastore at ¶131.)

**[19d] being defined and bounded by hardened fused edges of the laminated layers and**

Crye-436 discloses this limitation for the same reasons described above with respect to limitation 1c. (Ex. 1003-Pastore at ¶132.)

**[19e] configured for receiving one or more elongate straps or tabs to support a holder adjacent to the front side.**

Crye-436 discloses this limitation for the same reasons described above with respect to limitation 1e. (Ex. 1003-Pastore at ¶133.)

Thus, Crye-436 renders obvious claim 19.

**[CLAIM 21] The attachment system of claim 19, further characterized by a holder supported adjacent to the front side of the platform by at least one flexible strap woven through at least two of the aligned slits.**

Crye-436 discloses, teaches, and suggests this limitation for the same reasons disclosed above with respect to claims 7, 11, and 17. (Ex. 1003-Pastore at ¶135.)

Thus, Crye-436 renders obvious claim 21.

**[CLAIM 22] The attachment system of claim 19, wherein at least one of the layers comprises a synthetic rubber compound.**

Crye-436 discloses this limitation for the reasons discussed above with respect to claim 4. (Ex. 1003-Pastore at ¶136.)

Thus, Crye-436 renders obvious claim 22.

**[CLAIM 23] The attachment system of claim 22, wherein at least one of the layers comprises a woven nylon fabric laminated to the synthetic rubber compound layer.**

Crye-436 discloses this limitation for the reasons discussed above with respect to claims 4 and 5. (Ex. 1003-Pastore at ¶137.)

Thus, Crye-436 renders obvious claim 23.

**B. GROUND 2: Claims 1-11 are rendered obvious by Crye-436 in view of Bennett-237**

**1. Motivation to Combine Crye-436 and Bennett-237**

In accordance with the *Graham* factors and *KSR*, and as it relates to Ground 2, Crye-436 discloses attaching “a lightweight barrier fabric on the interior which is fastened to the bearing frame assembly 58 in such a way as not to interfere with the attachment of accessories to the bearing frame assembly, but which serves to prevent the passage of dust, debris, etc., through the bearing frame assembly openings onto the inner garments of the wearer.” (Ex. 1004 at 4:37-43.)

Crye-436 does not expressly state how the lightweight barrier fabric is attached to the platform. (Ex. 1003-Pastore at ¶¶138-39.) However, a POSITA would find it obvious that the lightweight barrier fabric should be attached to the UBFA (58) in such a manner to allow cleaning of the cavity created by the barrier fabric and the UBFA (58). (*Id.*) As Crye-436 recognizes, the barrier fabric prevents “passage of dust, debris, etc., through the bearing frame assembly openings onto the inner garments of the wearer.” A POSITA would know that this dust, debris, etc.

must be periodically removed as military personnel are required to routinely clean their gear. (Ex. 1010 at Chapter 4 (explaining the need to routinely clean military vests, such as MOLLE vests); Ex. 1003-Pastore at ¶139.) Further, a POSITA would have known that fabric components of a military garment could be repeatedly removed and cleaned using a hook-and-loop fastening system. (Ex. 1003-Pastore at ¶140 (citing Ex. 1013 at 2:65-3:7).)

Bennett-237 also relates to military and law enforcement garments, and discloses that an inner pocket, such as the one created by Crye-436's barrier fabric, may be readily opened/removed by using a fastening system, such as a hook-and-loop fastening system. As Bennett-237 explains:

“The present invention comprises a system for carrying and concealing a weapon, and additionally spare magazines or additional ammunition for the weapon. The invention comprises first and second flexible fabric panels. The panels are preferably joined along one edge which serves to hingedly connect the two panels, and the panels are releasibly secured to one another in an overlying relationship along at least one additional edge thereof. Preferably the releasable securing is accomplished by means of a hook-and-loop fastener....

The panels are so shaped as to conform to the front panel of a jacket or coat, and are intended to be attached to the inside of an article of clothing such as a jacket. The panel may be removably attached or permanently secured inside the garment. This may be accomplished, for example, by sewing the first panel to the inside of the garment.



Alternative fastening systems may be used such as snaps, buttons, adhesives or hook-and-loop fasteners. In this manner, the garment, the holster and the inner panel all cushion the outer side of the weapon, and with different thicknesses of panel, the cushioning may be such as to not merely hide the weapon from view, but also to mask the shape thereof.” (Ex. 1015-Bennett at 2:33-59.)

Given the need to periodically clean the inner pocket (cavity) created by Crye-436’s barrier fabric embodiment, it would have been obvious to use the fastening system teachings of Bennett-237 with the barrier fabric embodiment of Crye-436 to allow the wearer to repeatedly open and close the pocket to allow for easy removal of any “dust, debris, etc.” therein due to the barrier fabric. (Ex. 1003-Pastore at ¶¶141-43.)

Applying the fastening system teachings of Bennett-237 to the barrier fabric embodiments of Crye-436 would only require ordinary skill. A POSITA would only need to utilize the simple technique taught in Bennett-273 of adding hook-and-loop fasteners to the front side of the barrier fabric and the back side of the platform of Crye-436. (Ex. 1003-Pastore at ¶144.)

There was also a reasonable expectation of success in making this combination because the combination merely requires using conventional fastening components (VELCRO) with the Crye-436 barrier fabric and platform. Only basic garment production skills are required to add such fastening components to Crye-

436's garment, as evidenced by Bennett-237, which shows that such techniques were already well known and conventional by the 1990s. (Ex. 1003-Pastore at ¶145.)

## 2. Challenged Claims

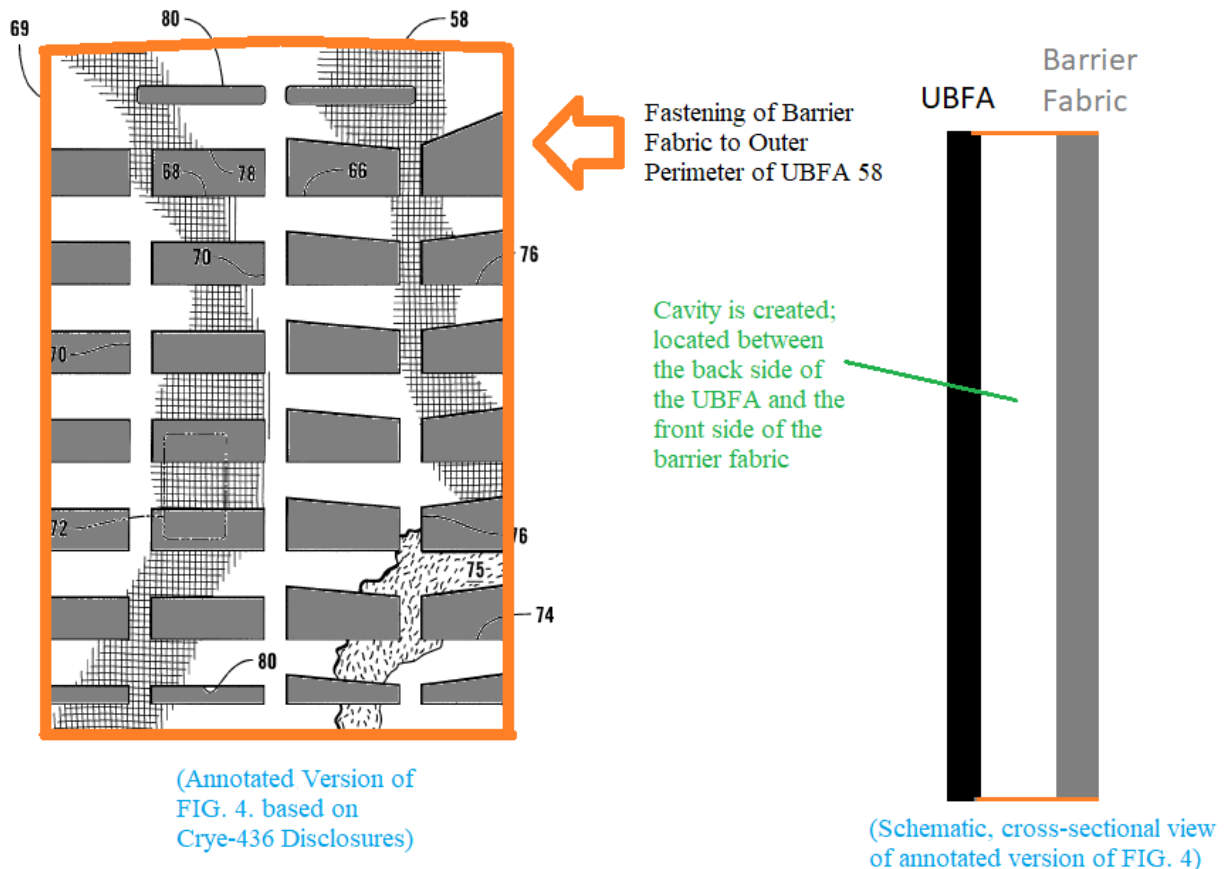
### **Preamble [1-PRE] through limitation [1f]**

Crye-436 discloses the preamble of claim 1 and limitations 1a through 1f for the same reasons described above with respect to Ground 1. (Ex. 1003-Pastore at ¶146.)

### **[1g] the back side and at least one element of the carrier or a backing element bounding a generally flat cavity through which the back side can be accessed.**

Crye-436 in view of Bennett-237 discloses this limitation. As explained above relative to Ground 1, Crye-436 discloses that a barrier fabric may be “fastened to the bearing frame assembly 58 in such a way as not to interfere with the attachment of accessories to the bearing frame assembly, but which serves to prevent the passage of dust, debris, etc., through the bearing frame assembly openings onto the inner garments of the wearer.” (Ex. 1004-Crye at 4:37-43.) As also explained above relative to Ground 1, it would be obvious to a POSITA to attach the barrier fabric of Crye-436 to the outer perimeter of the UBFA so as to accomplish the stated goal of attaching the barrier fabric in such a “way as not to interfere with the attachment of accessories to the bearing frame assembly, but which serves to prevent the passage of dust, debris, etc., through the bearing frame assembly openings onto

the inner garments of the wearer.” (Ex. 1003-Pastore at ¶¶147-48.) Doing so would create a generally flat cavity, as shown by the below example illustration.

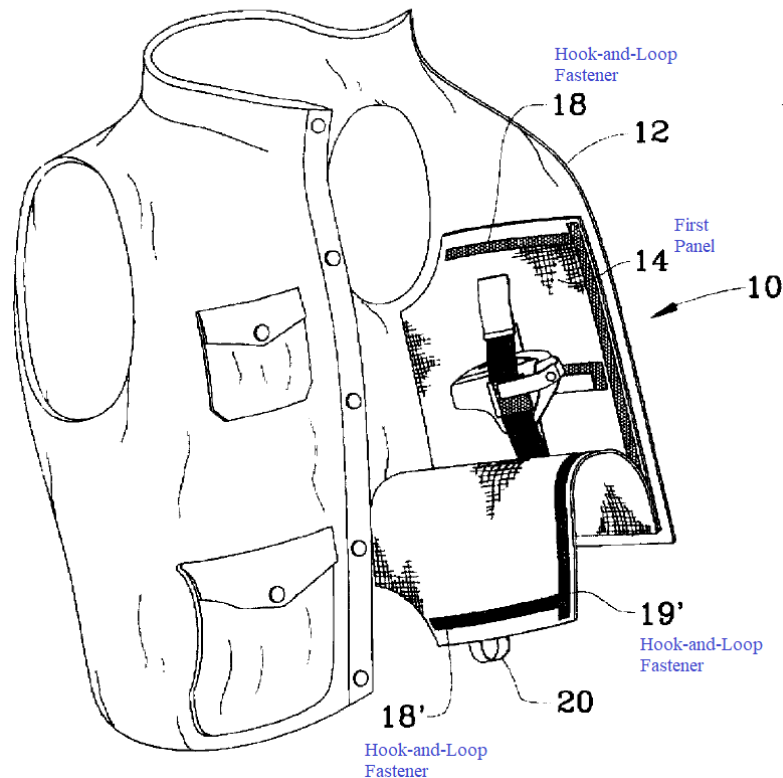


As also explained above relative to Ground 1, this generally flat cavity could be accessed via the full size openings (78) of the UBFA. However, Crye-436 does not disclose any manner to remove the “dust, debris, etc.” that may be trapped by Crye-436’s barrier fabric embodiment. (Ex. 1003-Pastore at ¶149.)

Bennett-237 discloses how generally flat cavities in garments such as Crye-436’s can be readily and reliably opened using fastening components such as any of “snaps, buttons, adhesives or hook-and-loop fasteners.” (Ex. 1015-Bennett at

2:54:55.) Of these, Bennett-237 teaches that hook-and-loop fasteners are preferable. (*Id.* at 2:41-43, 3:49-67.) FIG. 1 of Bennett-237 show one embodiment of how to releasably secure a pocket using hook-and-loop fasteners:

**FIG. 1**



Other embodiments are shown in FIGS. 2-5.

It would have been obvious to implement the fastening components of Bennett-237, such as hook-and-loop fastener, with the barrier fabric of Crye-436, as explained in detail above in § VIII.B.1. (Ex. 1003-Pastore at ¶¶150-51.) Doing so would improve the Crye-436 garment by making it easier to remove any “dust, debris, etc.” accumulated in the generally flat cavity created by the combination of

Crye-436's platform and barrier fabric. Adding the fastening components of Bennett-237 to the platform and barrier fabric of Crye-436 would allow for easy access to and cleaning of the generally flat cavity created by the barrier fabric embodiments of Crye-436. Further, it would be obvious to add the hook-and-loop fastener to one or more edges of the created pocket to access the created cavity, as specifically taught by Bennett-237. (Ex. 1015-Bennett at FIGS. 1, 3-4 (showing multiple edges with VELCRO) and FIGS. 2, 5-6 (showing a single edge with VELCRO); Ex. 1003-Pastore at ¶¶152-53.)

Thus, Crye-436 in view of Bennett-237 discloses this limitation. Accordingly, Crye-436 in view of Bennett-237 renders claim 1 obvious.

**[CLAIM 2] The attachment system of claim 1, wherein at least one of the back side and the backing element comprises a fastening component of a hook and loop fastening system.**

Crye-436 in view of Bennett-237 discloses this limitation. As explained above relative to limitation 1g, Bennett-237 discloses a preference for hook-and-loop fasteners, and a POSITA would have used such fasteners to make Crye-436's cavity accessible for cleaning purposes. (Ex. 1003-Pastore at ¶155.)

Therefore, Crye-436 in view of Bennett-237 renders claim 2 obvious.

**[CLAIM 3] The attachment system of claim 1, wherein at least one of the layers comprises an adhesive.**

Crye-436 discloses claim 3 for the same reasons described above with respect to Ground 1, and thus Crye-436 in view of Bennett-237 renders claim 3 obvious. (Ex. 1003-Pastore at ¶157.)

**[CLAIM 4] The attachment system of claim 1, wherein at least one of the layers comprises a synthetic rubber compound.**

Crye-436 discloses claim 4 for the same reasons described above with respect to Ground 1, and thus Crye-436 in view of Bennett-237 renders claim 4 obvious. (Ex. 1003-Pastore at ¶158.)

**[CLAIM 5] The attachment system of claim 4, wherein the platform comprises a woven nylon fabric laminated to the synthetic rubber compound.**

Crye-436 discloses claim 5 for the same reasons described above with respect to Ground 1, and thus Crye-436 in view of Bennett-237 renders claim 5 obvious. (Ex. 1003-Pastore at ¶159.)

**[CLAIM 6] The attachment system of claim 1, wherein the edges are hardened by laser fusion.**

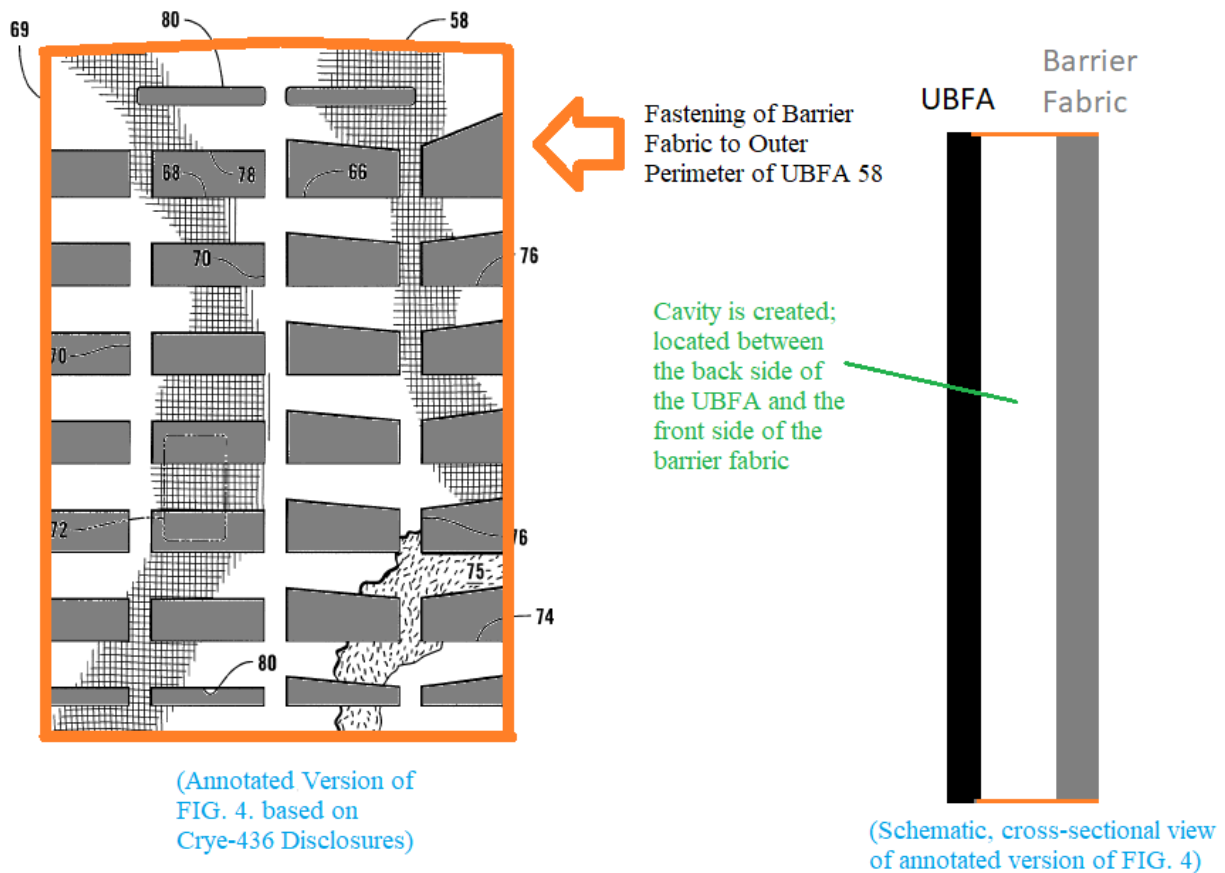
Crye-436 discloses claim 6 for the same reasons described above with respect to Ground 1, and thus Crye-436 in view of Bennett-237 renders claim 6 obvious. (Ex. 1003-Pastore at ¶160.)

**[CLAIM 7] The attachment system of claim 1, further comprising at least one strap woven through selected ones of the slits attaching a holder to the platform.**

Crye-436 discloses claim 7 for the same reasons described above with respect to Ground 1, and thus Crye-436 in view of Bennett-237 renders claim 7 obvious. (Ex. 1003-Pastore at ¶161.)

**[CLAIM 8] The attachment system of claim 1, wherein the back side and the at least one element of the carrier or the backing element comprise coextensive edges comprising fastening components fastened together to prevent entry of particulates therebetween, the fastening components being unfastenable to allow manually accessing the cavity therebetween.**

Crye-436 in view of Bennett-237 discloses this limitation. As explained above, it would have been obvious to attach Crye-436's barrier fabric to the outer perimeter of the UBFA.



By attaching the barrier fabric to the outer perimeter of the UBFA, any debris passed through the openings (66) of the UBFA would be fully contained. (Ex. 1003-Pastore at ¶¶162-63.) Further, attaching to the outer perimeter of the UBFA would not interfere with attachment of accessories because the slits (80) and/or full size openings (78) would remain available for attachment. As explained above relative to limitation 1g and claim 2, and as shown in FIGS. 1-6 of Bennett-237, it was obvious to a POSITA that the outer perimeter attachment could be accomplished using hook-and-loop fastening components at one or more coextensive edges to allow access to the pocket for cleaning thereof. Thus, Crye-436 in view of Bennett-



237 disclose both “wherein the back side and ... the backing element comprise coextensive edges comprising fastening components fastened together to prevent entry of particulates therebetween, the fastening components being unfastenable to allow manually accessing the cavity therebetween.” (Ex. 1003-Pastore at ¶¶162-63.)

Therefore, Crye-436 in view of Bennett-237 renders claim 8 obvious.

**[CLAIM 9] The attachment system of claim 8, wherein the fastening components comprise components of a hook and loop fastening system.**

Crye-436 in view of Bennett-237 discloses this limitation for the reasons provided above relative to limitation 1g and claims 2 and 8. (Ex. 1003-Pastore at ¶166.)

Thus, Crye-436 in view of Bennett-237 discloses this limitation, and Crye-436 in view of Bennett-237 renders claim 9 obvious.

**[CLAIM 10] The attachment system of claim 1, wherein the carrier comprises a vest, a cummerbund, or a belt.**

Crye-436 discloses claim 10 for the same reasons described above with respect to Ground 1, and thus Crye-436 in view of Bennett-237 renders claim 10 obvious. (Ex. 1003-Pastore at ¶168.)

**[CLAIM 11] The attachment system of claim 1, further comprising a holder configured for holding at least one object or article, having a strap extending therefrom and woven through at least two of the slits interlockingly attaching the holder to the platform.**

Crye-436 discloses claim 11 for the same reasons described above with respect to Ground 1, and thus Crye-436 in view of Bennett-237 renders claim 11 obvious. (Ex. 1003-Pastore at ¶169.)

**C. GROUND 3: Claims 1-11 are rendered obvious by Crye-436 in view of Asher-149**

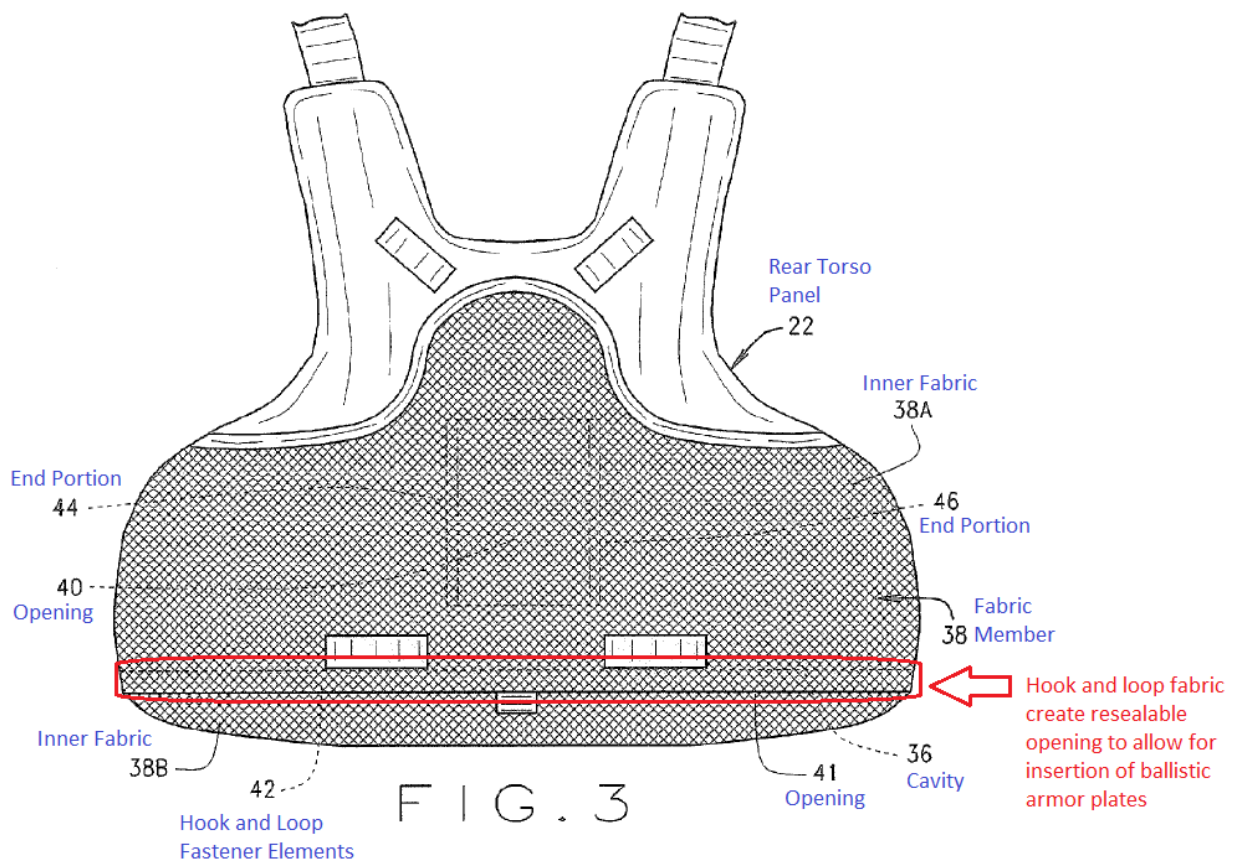
**1. Motivation to Combine Crye-436 and Asher-149**

As explained previously, the barrier fabric embodiments of Crye-436 create a cavity. One purpose of Crye-436's cavity is to capture "dust, debris, etc." (Crye-436 at 4:37-43.) Those skilled in the art would have known that this cavity would also be useful in bulletproofing Crye-436's garment. (Ex. 1003-Pastore at ¶¶170-71.) Indeed, it was common to include bulletproof military and law enforcement garments using such cavities. (*Id.* (citing Ex. 1014 at 71).) This is expressly recognized by Asher-149:

"Tactical vests and other similar garments are well known, particularly in the military and law enforcement environments, and *such vests and garments typically include pockets, pouches or other means for carrying ballistic armor plating for the protection of the wearer.* Such armor plating is typically worn in the front and/or back portion of the vest or other similar garment and is made of suitable material to provide the necessary protection to the wearer depending upon the particular

application such as stopping bullets, sharp metal, and other hazards associated with a particular tactical situation.” (Ex. 1005-Asher at ¶2 (emphasis added).)

Thus, it was well-known that military and law enforcement garments (such as those described by Crye-436) may require one or more armor panel compatible pouches (“armor pouches”), which armor pouches allow the insertion and removal of ballistic armor panels/plating to make the garment “bullet proof.” As Asher-149 explains, these armor pouches are generally accessible via a hook-and-loop fastener system, whereby the user can open the armor pouch via the hook-and-loop fastener system, insert the armor panel into the armor pouch, and then close the armor pouch via the same hook-and-loop fastener system. (*Id.* at ¶16.) This is also illustrated in FIG. 3 of Asher-149:



Given that the Crye-436 garment may be used for military and other combat ready situations, it would have been obvious to add one or more such armor pouches to the Crye-436 garment as evidenced by Asher-149. (Ex. 1003-Pastore at ¶¶172-74.) Indeed, given both the Crye-436 garment and the Asher-149 garment are MOLLE compatible, it would have been obvious to use the teachings of Asher-149 when adding one or more armor pouches to the Crye-436 garment. Further, including one or more armor pouches as per Asher-149 in the garment of Crye-436 would require no more than ordinary skill, simply requiring an ordinary craftsman to add a suitable pouch fabric and closure system (e.g., VELCRO) to a known

garment. There was also a reasonable expectation of success in making this combination because the combination merely requires using conventional and well known techniques from Asher-149 to include an accessible cavity in the Crye-436 garment. Indeed, modifying Crye-436 to include a user accessible armor pouch would merely require the use of ordinary skill, such as by utilizing a hook-and-loop system with the barrier fabric embodiments of Crye-436. (Ex. 1003-Pastore at ¶¶172-74.) Only basic garment production skills are required to make Crye-436's garment suitable for holding armor panels/plating, as evidenced by Asher-149 who shows that such techniques are already typical, well known and conventional in the field. (*Id.*) .” Further, such a cavity would be suitable for an armor panel/plate as armor panels/plates are designed to be used in a wide variety of environmental conditions. (Ex. 1014 at §§ 5.1 and 6.1 (explaining that armor panels are tested in conditions “intended to provide some indication of the armor’s ability to maintain ballistic performance after being exposed to conditions of heat, moisture, and mechanical wear”); *see also* § 5.3.4 and 6.3.4 (explaining the durability testing requirements for armor panels, which included temperature, humidity and mechanical wear testing).) For at least these reasons, it would have been obvious to modify the Crye-436 garments to include one or more armor pouches, and there was a reasonable expectation of successfully doing so.

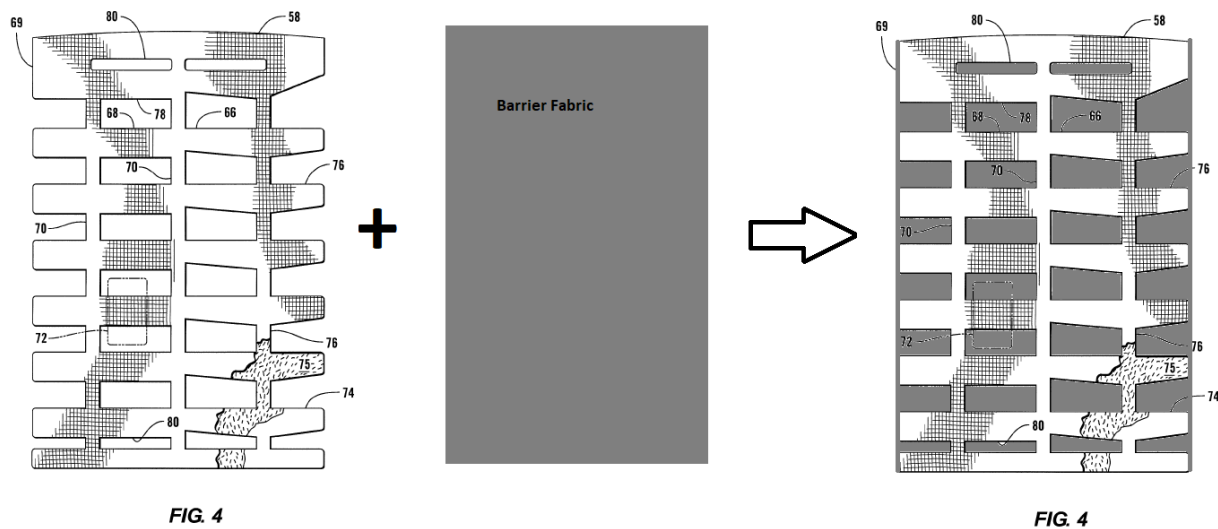
## 2. Challenged Claims

### **Preamble [1-PRE] through limitation [1f]**

Crye-436 discloses the preamble of claim 1 and limitations 1a through 1f for the same reasons described above with respect to Ground 1. (Ex. 1003-Pastore at ¶176.)

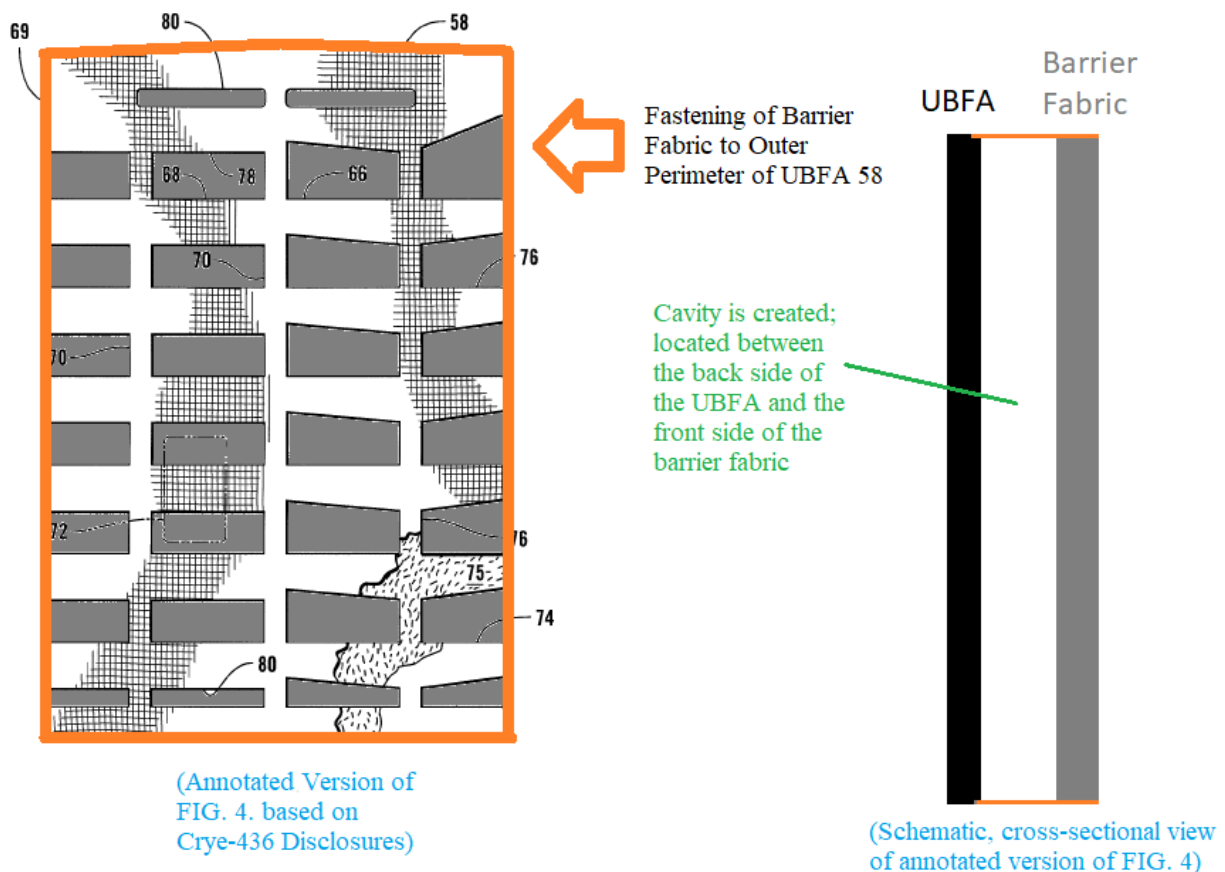
### **[1g] the back side and at least one element of the carrier or a backing element bounding a generally flat cavity through which the back side can be accessed.**

Crye-436 in view of Asher-149 discloses this limitation. Specifically, Crye-436 discloses that a barrier fabric may be “fastened to the bearing frame assembly 58 in such a way as not to interfere with the attachment of accessories to the bearing frame assembly, but which serves to prevent the passage of dust, debris, etc., through the bearing frame assembly openings onto the inner garments of the wearer.” (Ex. 1004-Crye at 4:37-43.) One potential method of fastening the Crye-436 barrier fabric to the Crye-436 UBFA is shown in the below diagram, which is based on FIG. 4 plus the barrier fabric disclosure of Crye-436 (the gray barrier fabric portion is not illustrated in the figures of Crye-436; instead it is described in the text).



While Crye-436 does not expressly state where to fasten the barrier fabric to the UBFA, Crye-436 does disclose that its barrier fabric should be attached to the UBFA “in such a way as not to interfere with the attachment of accessories to the bearing frame assembly, but which serves to prevent the passage of dust, debris, etc., through the bearing frame assembly openings onto the inner garments of the wearer.” (Ex. 1004-Crye at 4:37-43.) In doing so, it would have been obvious to attach the barrier fabric of Crye-436 to the outer perimeter of the UBFA so as to accomplish the stated goal of attaching the barrier fabric in such a “way as not to interfere with the attachment of accessories to the bearing frame assembly, but which serves to prevent the passage of dust, debris, etc., through the bearing frame assembly openings onto the inner garments of the wearer.” (Ex. 1003-Pastore at ¶¶177-80.) By attaching the barrier fabric to the outer perimeter of the UBFA, any debris passed through the openings (66) of the UBFA would be fully contained. Attaching to the outer

perimeter of the UBFA would not interfere with attachment of accessories because the slits (80) and/or full size openings (78) would remain available for attachment. Further, by fastening the barrier fabric to the UBFA (58) in such a manner, a cavity would be created, as shown by the below example illustration. (Ex. 1003-Pastore at ¶181.)



As noted previously, Crye-436 discloses MOLLE compatible garments that are designed to enhance the equipment available to the armed forces, e.g., to enhance vests and other garments used by the U.S. Army for military personnel. (Ex. 1004-Crye at 1:32-43 (emphasis added).) Like Crye-436, Asher-149 discloses a MOLLE



compatible garment for use in military applications and having one or more cavities for housing armor panels/plates:

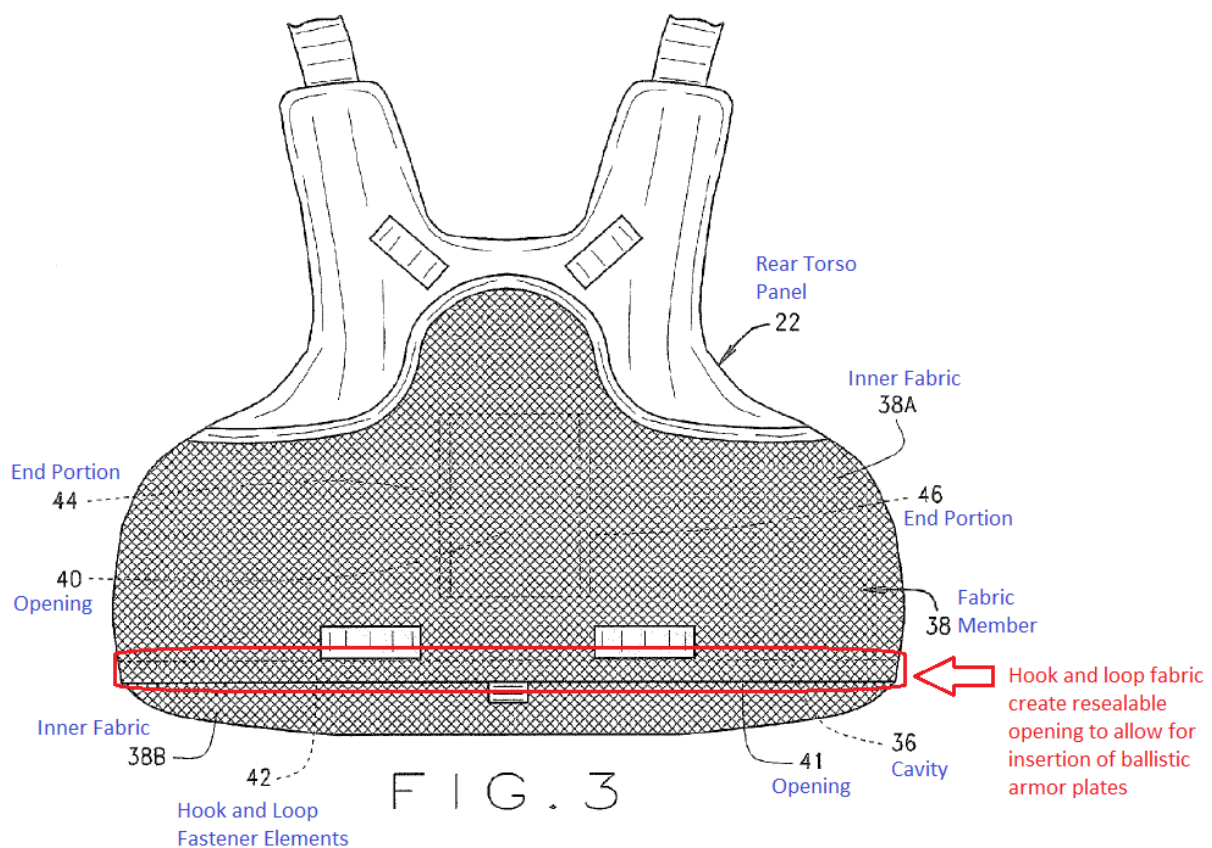
“FIGS. 1-4 illustrate one embodiment of a typical side-opening vest which houses at least an internal front torso pocket for receiving armor plate members for protection of the wearer ....***The front torso panel 22 may include a Molle System*** which comprises a plurality of vertically and horizontally oriented loops such as the loops 26 which are adapted for receiving attachment means associated with pouches and other accessory equipment which can be easily attached and removed from the front portion of the vest.” (Ex. 1005-Asher at ¶13.)

“The present invention relates to an internal vest divider member or baffle member 40 associated with an internal pocket or pouch 36 associated with ***either or both the front and rear torso panels 22 and 28*** as will be hereinafter further described. ***As best illustrated in FIGS. 3 and 4, the front torso panel 22 includes an internal pocket 36 which is specifically sized and shaped for carrying either a single armor plate member or a pair of armor plate members for providing protection to the wearer when the wearer is exposed to hostile fire and other tactical dangers. The pocket 36 is located on the inside portion of the front torso panel 22 (FIG. 3) and can be formed by attaching or otherwise overlaying another fabric member such as the member 38 (FIGS. 3 and 4) to the inside portion of the front torso panel 22 and providing an opening 40 through such member 38 for accessing the pocket or cavity 36 formed therebetween.*** The fabric member 38 may comprise a mesh type material as illustrated in FIG. 3, or such

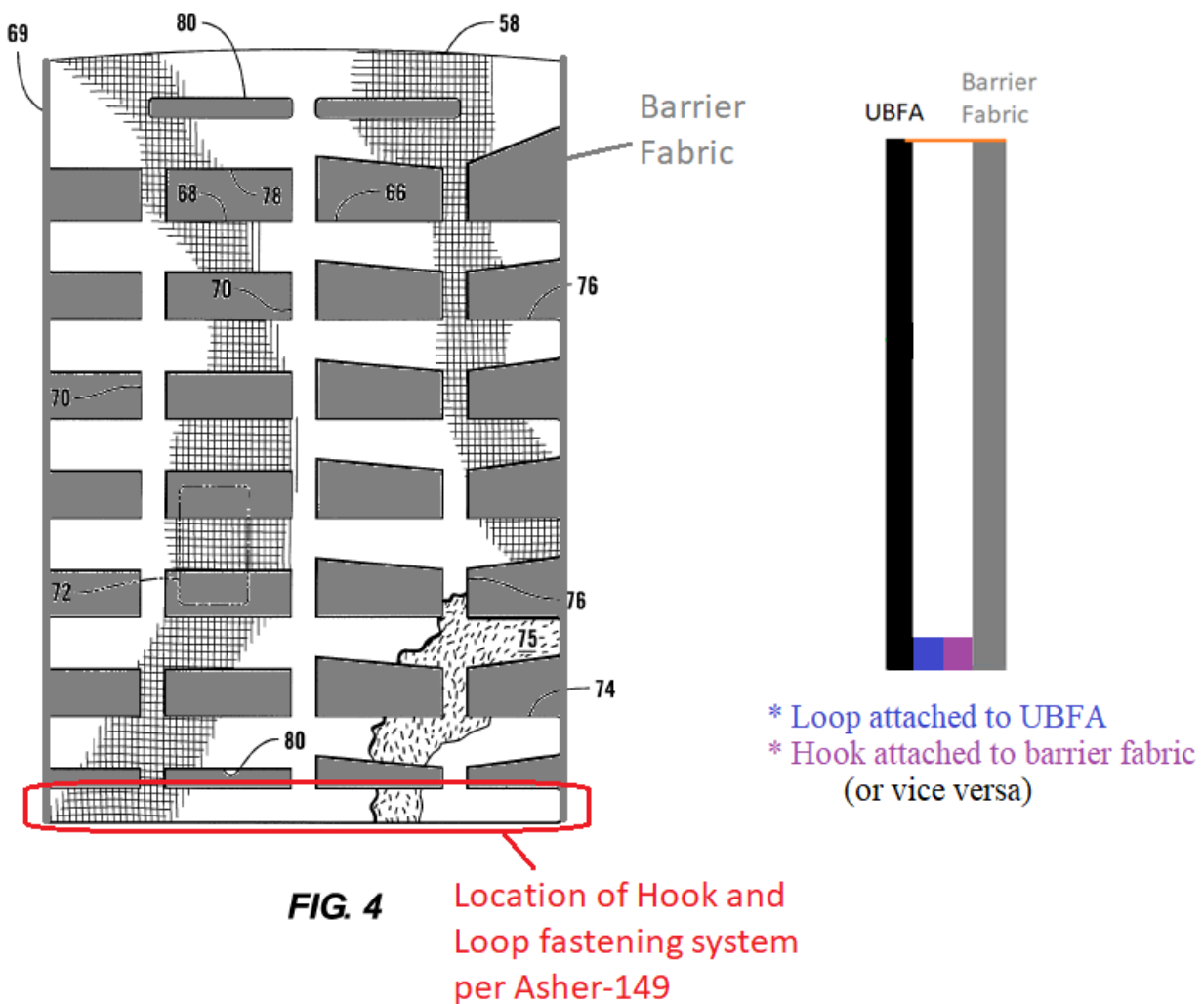
member may be made of any other suitable material.” (*Id.* at ¶16 (emphasis added).)

It would have been obvious to implement the armor cavity / pouch teachings of Asher-149 in the garment of Crye-436, as explained in detail above in § VIII.C.1. (Ex. 1003-Pastore at ¶¶182-84.) Doing so would make the Crye-436 garment ballistics resistant, which is a desirable feature of such garments. Combining the armor pouch feature of Asher-149 with the lightweight garment of Crye-436 would create an improved garment that is lighter than the garment disclosed in Asher-149, provides a cavity for housing an armor panel/plate, and is MOLLE compatible. (*Id.*)

It would also have been obvious to implement armor pouch(es) in the Crye-436 garments by simply adding hook-and-loop features to the barrier fabric embodiments of Crye-436, such as by adding hook material to the backside of the platform and corresponding loop material to the corresponding portion of the barrier fabric, or vice-versa. (*Id.* at ¶185.) Asher-149 illustrates this, e.g., in FIG. 3.



Accordingly, when adding one or more armor pouches to a Crye-436 garment, it would have been obvious to modify the barrier fabric embodiments of Crye-436 to use a hook-and-loop fastener system at or near the bottom of the UBFA and the corresponding barrier fabric. (Ex. 1003-Pastore at ¶¶186-87.)



In doing so, an armor panel/plate could be readily inserted and removed via the created armor pouch. Doing so would also create a “generally flat cavity through which the back side can be accessed.” Further, such a cavity would be suitable for an armor panel/plate as armor panels/plates are designed to be used in a wide variety of environmental conditions. (Ex. 1014 at §§ 5.1 and 6.1 (explaining that armor panels are tested in conditions “intended to provide some indication of the armor’s ability to maintain ballistic performance after being exposed to conditions of heat,

moisture, and mechanical wear”); *see also* § 5.3.4 and 6.3.4 (explaining the durability testing requirements for armor panels, which included temperature, humidity and mechanical wear testing).) Therefore, a POSITA would have found it obvious to use one of a hook or a loop fastener on the back side of the Crye-436 UBFA and the other of a hook or loop fastener on the front side of the barrier fabric in order to form an openable armor pouch (a cavity) for carrying an armor panel/plate. (Ex. 1003-Pastore at ¶¶188-89.)

Thus, Crye-436 in view of Asher-149 discloses this limitation, and Crye-436 in view of Asher-149 renders claim 1 obvious.

**[CLAIM 2] The attachment system of claim 1, wherein at least one of the back side and the backing element comprises a fastening component of a hook and loop fastening system.**

Crye-436 in view of Asher-149 discloses this limitation. As explained above with respect to claim 1, it would have been obvious to use one of a hook or a loop fastener on the back side of the Crye-436 UBFA and the other of a hook or loop fastener on the front side of the barrier fabric in order to form an armor pouch (a cavity) for carrying an armor panel/plate. (*See* limitation 1g.) Thus, Crye-436 in view of Asher-149 discloses both “the back side ... comprises a fastening component of a hook and loop fastening system” and “the backing element comprises a fastening component of a hook and loop fastening system.” (Ex. 1003-Pastore at ¶¶191-92.)

Therefore, Crye-436 in view of Asher-149 renders claim 2 obvious.

**[CLAIM 3] The attachment system of claim 1, wherein at least one of the layers comprises an adhesive.**

Crye-436 discloses claim 3 for the same reasons described above with respect to Ground 1, and thus Crye-436 in view of Asher-149 renders claim 3 obvious. (Ex. 1003-Pastore at ¶194.)

**[CLAIM 4] The attachment system of claim 1, wherein at least one of the layers comprises a synthetic rubber compound.**

Crye-436 discloses claim 4 for the same reasons described above with respect to Ground 1, and thus Crye-436 in view of Asher-149 renders claim 4 obvious. (Ex. 1003-Pastore at ¶195.)

**[CLAIM 5] The attachment system of claim 4, wherein the platform comprises a woven nylon fabric laminated to the synthetic rubber compound.**

Crye-436 discloses claim 5 for the same reasons described above with respect to Ground 1, and thus Crye-436 in view of Asher-149 renders claim 5 obvious. (Ex. 1003-Pastore at ¶196.)

**[CLAIM 6] The attachment system of claim 1, wherein the edges are hardened by laser fusion.**

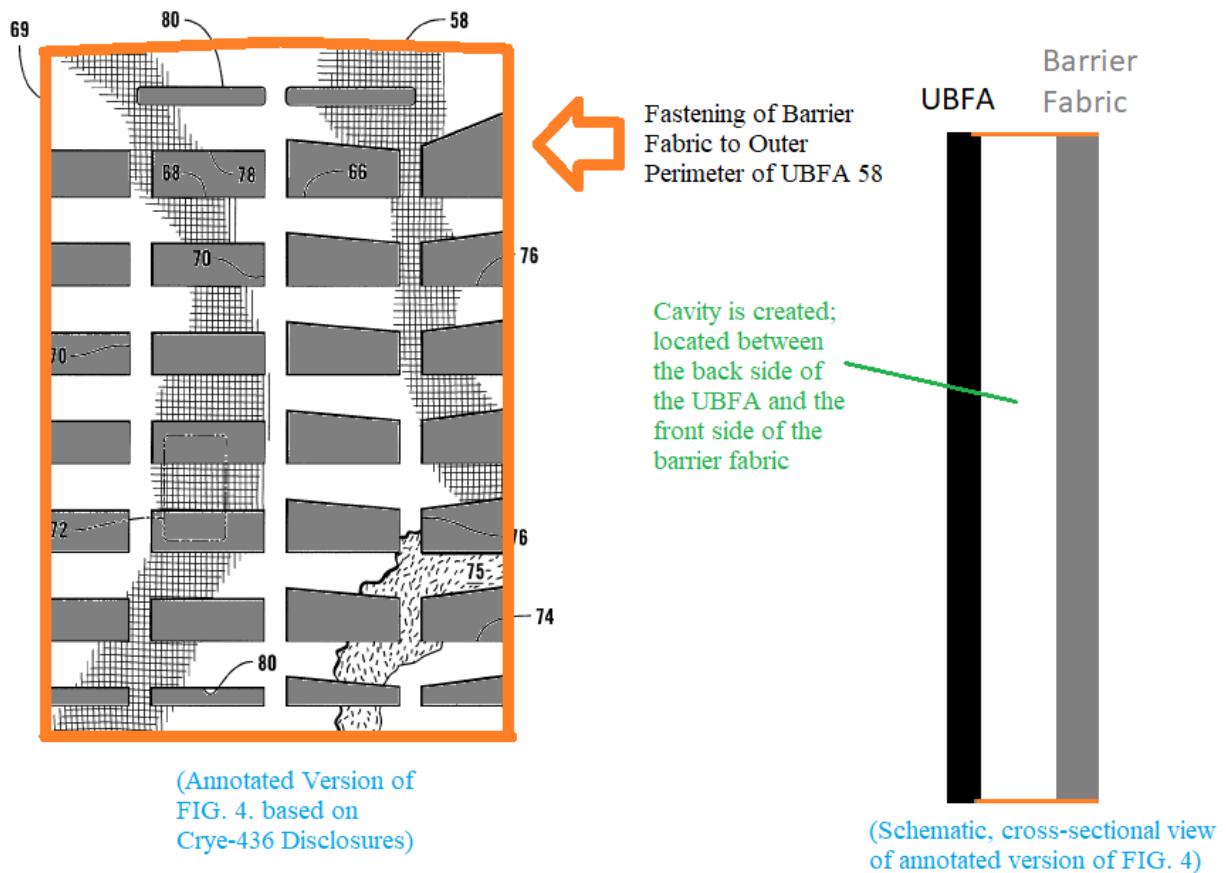
Crye-436 discloses claim 6 for the same reasons described above with respect to Ground 1, and thus Crye-436 in view of Asher-149 renders claim 6 obvious. (Ex. 1003-Pastore at ¶197.)

**[CLAIM 7] The attachment system of claim 1, further comprising at least one strap woven through selected ones of the slits attaching a holder to the platform.**

Crye-436 discloses claim 7 for the same reasons described above with respect to Ground 1, and thus Crye-436 in view of Asher-149 renders claim 7 obvious. (Ex. 1003-Pastore at ¶198.)

**[CLAIM 8] The attachment system of claim 1, wherein the back side and the at least one element of the carrier or the backing element comprise coextensive edges comprising fastening components fastened together to prevent entry of particulates therebetween, the fastening components being unfastenable to allow manually accessing the cavity therebetween.**

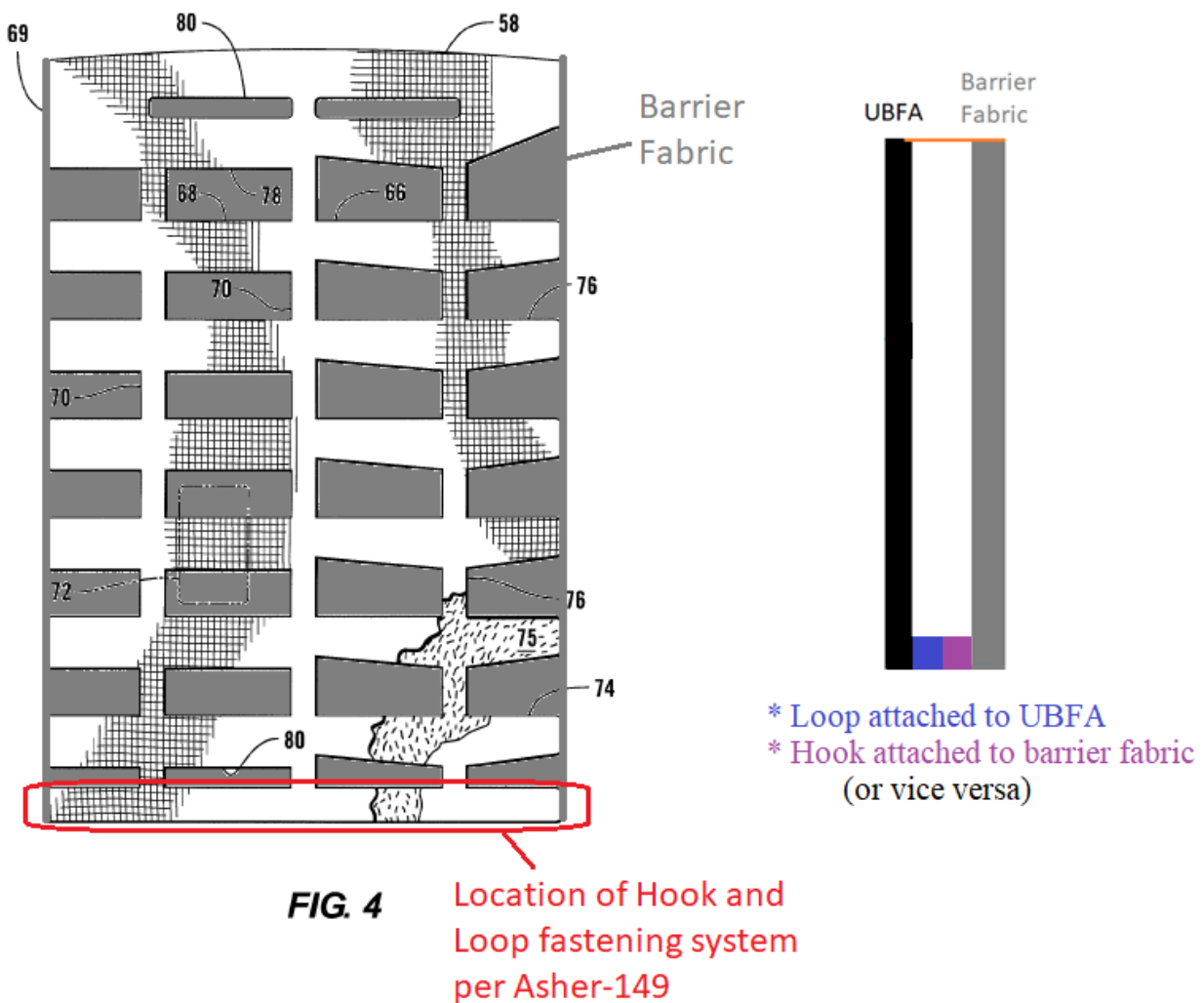
Crye-436 in view of Asher-149 discloses this limitation. As explained above relative to limitation 1g and claim 2, it would have been obvious to create one or more openable armor pouches in the Crye-436 garments using the barrier fabric of Crye-436 and components of a hook-and-loop fastening system, as per Asher-149. It also would have been obvious to fasten the barrier fabric to the outer perimeter of the UBFA. (*See* limitation 1g.) Doing so results in the barrier fabric being fastened to the UBFA at “coextensive edges,” such as per the below example illustration.



By attaching the barrier fabric to the outer perimeter of the UBFA, any debris passed through the openings of the UBFA would be fully contained. Further, attaching to the outer perimeter of the UBFA would not interfere with attachment of accessories because the slits and/or full size openings would remain available for attachment. (Ex. 1003-Pastore at ¶¶199-201.) Thus, Crye-436 discloses, teaches, and suggests “wherein the back side and the at least one element of the carrier or the backing element comprise coextensive edges... fastened together to prevent entry of particulates therebetween.” (See limitation 1g.)



As also explained relative to limitation 1g, it would have been obvious to implement the armor cavity / pouch teachings of Asher-149 in the garment of Crye-436, as explained in detail above in § VIII.C.1. Further, it would have been obvious to implement armor pouch(es) in the Crye-436 garments by simply adding hook-and-loop features to the barrier fabric embodiments of Crye-436, such as by adding hook material to the backside of the platform and corresponding loop material to the corresponding portion of the barrier fabric, or vice-versa as this is exactly how Asher-149 creates its armor pockets. Accordingly, when adding one or more armor pouches to a Crye-436 garment, it would have been obvious to modify the barrier fabric embodiments of Crye-436 to use a hook-and-loop fastener system at or near the bottom of the UBFA and the corresponding barrier fabric.



In doing so, an armor panel/plate could be readily inserted and removed via the created armor pouch. (See limitation 1g.) Therefore, it would have been obvious to use one of a hook or a loop fastener on the back side of the Crye-436 UBFA and the other of a hook or loop fastener on the front side of the barrier fabric in order to form an openable armor pouch (a cavity) for carrying an armor panel/plate. Doing so provides for both the UBFA and the barrier fabric to include “fastening components fastened together to prevent entry of particulates therebetween, the fastening

components being unfastenable to allow manually accessing the cavity therebetween.” (Ex. 1003-Pastore at ¶¶202-04.)

Thus, Crye-436 in view of Asher-149 discloses this limitation, and Crye-436 in view of Asher-149 renders claim 8 obvious.

**[CLAIM 9] The attachment system of claim 8, wherein the fastening components comprise components of a hook and loop fastening system.**

Crye-436 in view of Asher-149 discloses this limitation. In particular, as explained above with respect to limitation 1g and claims 2 and 8, it would have been obvious to employ a hook-and-loop fastening system as a way to open and close the armor pouch(es) described above. (See limitation 1g, claim 2, claim 8; *see also* Ex. 1003-Pastore at ¶206.)

Thus, Crye-436 in view of Asher-149 discloses this limitation, and Crye-436 in view of Asher-149 renders claim 9 obvious.

**[CLAIM 10] The attachment system of claim 1, wherein the carrier comprises a vest, a cummerbund, or a belt.**

Crye-436 discloses claim 10 for the same reasons described above with respect to Ground 1, and thus Crye-436 in view of Asher-149 renders claim 10 obvious. (Ex. 1003-Pastore at ¶208.)

**[CLAIM 11] The attachment system of claim 1, further comprising a holder configured for holding at least one object or article, having a strap extending therefrom and woven through at least two of the slits interlockingly attaching the holder to the platform.**

Crye-436 discloses claim 11 for the same reasons described above with respect to Ground 1, and thus Crye-436 in view of Asher-149 renders claim 11 obvious. (Ex. 1003-Pastore at ¶209.)

#### **IX. SECONDARY CONSIDERATIONS**

Petitioner is not aware of any secondary considerations that would overcome the strong showing of obviousness provided by the Petition. Further, any attempt by Patent Owner to rely on alleged secondary considerations cannot overcome the showing of obviousness detailed above. *Tokai Corp. v. Easton Enters., Inc.*, 632 F.3d 1358, 1370 (Fed. Cir. 2011).

#### **X. CONCLUSION**

For the foregoing reasons, Petitioner respectfully request that the *inter partes* review of the '379 patent be instituted as the Petition establishes a reasonable likelihood of prevailing with respect to the Challenged Claims. Petitioner further respectfully requests that Claims 1-11, 13-14, 17-19, and 21-23 be cancelled as unpatentable.

Respectfully submitted,  
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Date: June 10, 2019

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**CERTIFICATE OF SERVICE**

The undersigned certifies that a true and correct copy of the Petition together with all exhibits identified in the above Table of Exhibits and Petitioner's Power of Attorney, have been served on the Patent Owner via Priority Mail Express or by means at least as fast and reliable as Priority Mail Express on the below date, at the following addresses:

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Respectfully submitted,  
GREENBERG TRAURIG, LLP

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